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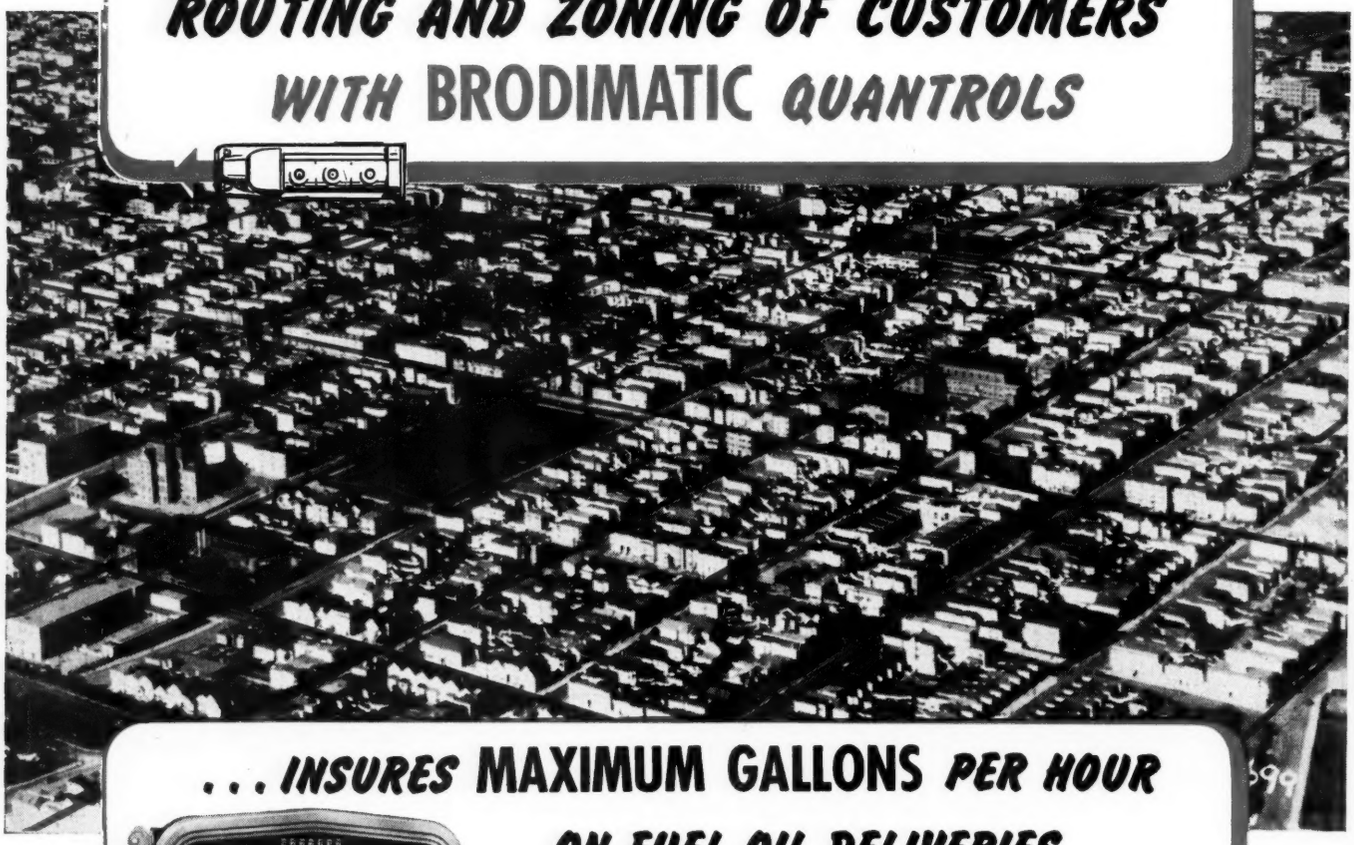
JANUARY 1946

Annual Oilheating Analysis

fueloil & oil heat

PLANNED
ROUTING AND ZONING OF CUSTOMERS
WITH BRODIMATIC QUANTROLS



. . . INSURES MAXIMUM GALLONS PER HOUR
ON FUEL OIL DELIVERIES

One important factor, influencing the efficiency and cost of tank truck operation is the proper scheduling of deliveries. To eliminate return loads, back hauls and call backs; to make the minimum number of "stops" per customer per year with less time and mileage, install Brodie Meters equipped with Brodimatic Quantrol. The Brodie automatic quantity control eliminates overfilling, spillage, and waste, as well as damage to customer's property. Once you set it—you simply forget it, for the meter automatically shuts off, when the exact preset quantity has been delivered. Write for full details Today.

BRODIE METERS

PETROLEUM METERING EXCLUSIVELY

SINCE 1927

RALPH N. BRODIE CO., Inc.
)53 61st Street, Oakland 8, CALIFORNIA

Division Offices: Chrysler Building, NEW YORK CITY • 59 E. Van Buren, CHICAGO • 302 So. Pearl, DALLAS, TEXAS • 164 Jackson, SEATTLE, WASHINGTON • 2101 So. San Pedro, LOS ANGELES, CALIFORNIA

VOL. 4 NO. 9

fueloil & oil heat

JANUARY

1946

Names in the News

L. B. Miller and *Allen Butler* have been elected vice presidents of the Perfex Corp., Milwaukee, in the Company's Controls Div. *Miller*, formerly manager of the Air Conditioning and Refrigeration Div. of Minneapolis-Honeywell, joined Perfex in 1939 in an executive sales capacity. He has been associated

Miller

Butler

with the Controls Industry for the past 21 years. Entering the Controls field in 1929 with Time-O-Stat Controls Co., *Butler* joined forces with Perfex in 1935. After a year in Milwaukee handling advertising and sales promotion, he was appointed manager of their Chicago office, in charge of sales throughout the Midwest.

George D. Shaeffer formerly chief engineer of Gar-Wood Industries, Inc., has been elected vice president in charge of engineering. Shaeffer joined Gar-Wood in 1938 as chief engineer of its road machinery division, after having served as chief of the road machinery engineering dept. for Allis-Chalmers Mfg. Co., Milwaukee.

Richard Eissbrenrer has returned to H. A. Thrush & Co., Peru, Ind., as member of its field organization, after almost five years of Army service. He is located at the Cleveland office.

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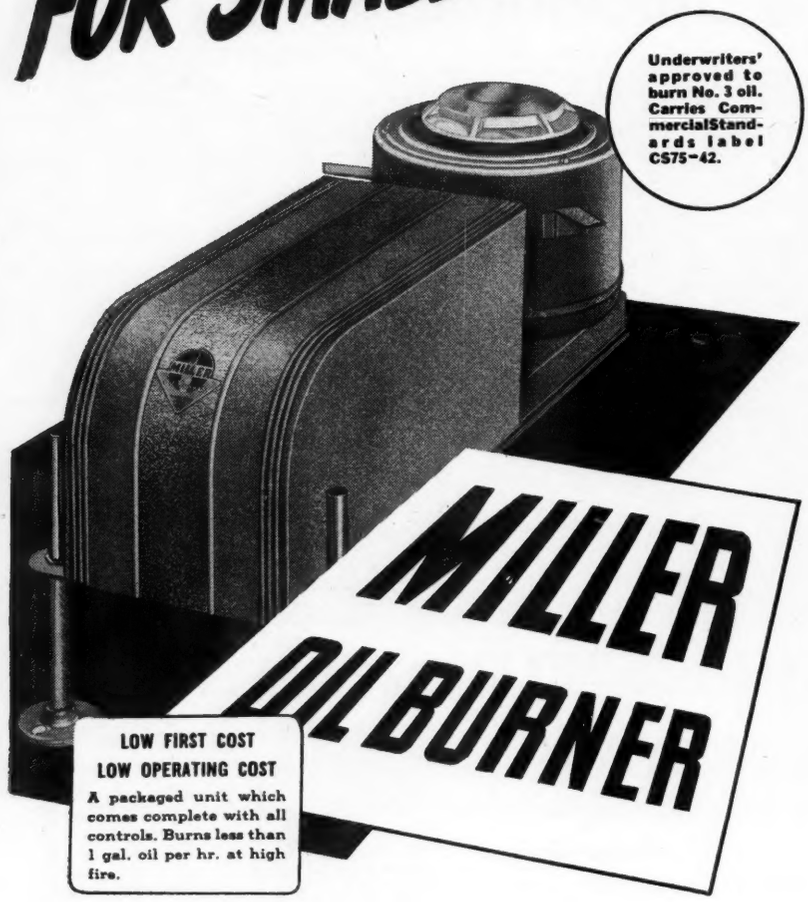
FOR SMALL HOMES


Underwriters' approved to burn No. 3 oil. Carries CommercialStandards label CS75-42.
MILLER
OIL BURNER
LOW FIRST COST
LOW OPERATING COST
A packaged unit which comes complete with all controls. Burns less than 1 gal. oil per hr. at high fire.

FRANCHISES AVAILABLE

The Miller Oil Burner is expressly designed for small homes. Can be installed in warm air furnaces, or steam or hot water boilers. It's efficient. It's economical. Has been proven in actual use. 101 years of experience in the building of oil-burning devices is behind it. You need it to round out your oil heating line! Franchises available in many sections. But don't delay!

WRITE OR WIRE FOR FULL DETAILS TODAY!

THE MILLER COMPANY
HEATING PRODUCTS DIVISION
MERIDEN, CONN.
Since 1844

Paul B. Wishart, Arthur H. Lockrae, John E. Haines, and *C. D. Lyford* were elected vice presidents of the Minneapolis-Honeywell Reg. Co. at a December 18 meeting. Wishart is in charge of factory operations, Lockrae in charge of the heating controls dept., Haines in charge

Lockrae

Haines

Lyford

Wishart

of the commercial controls dept., and Lyford will be in charge of sales to the gas industry.

At the same meeting *C. B. Sweatt* and *W. A. Huff* were elected to newly created positions of executive vice president. *Thomas McDonald* was named vice president in charge of sales, and *Alfred H. Wilson,* also a vice president, will be in charge of aeronautical controls division. *James H. Binger* was elected assistant secretary.

H. H. Hackett, Sr., has been appointed district representative in Pennsylvania for Williams Oil-O-Matic Htg. Div., Eureka Vacuum Cleaning Co. Hackett comes to Oil-O-Matic from the Reconstruction Finance Corp. office in Philadelphia where he served as examiner of surplus war materials. His oil-burner experience started in 1922 with the Willne- Burner Mfg. Co. of Philadelphia.

Sixty Years

is a long time in the boiler business

400 SERIES — the boiler for small homes.

OIL-EIGHTY for medium size residences.

R-Z-U JUNIOR for apartment buildings and larger residences.

D-TYPE for institutional and office buildings, theatres, etc.

P SERIES — Steam Service 100-125-150 lbs. wsp.

After sixty years of trying, you've either learned how to make a really fine product—or you're in some other business. *Fitzgibbons began making steel heating boilers in 1886 and is still making them . . .*

In sixty years it is possible to go adventuring up many blind alleys, try quite a few profitless or futile ideas in equipment design and manufacture. It is also possible to produce a number of rather brilliantly successful results. This is what they call "experience", and there is no short cut to it. Fitzgibbons has traveled the whole long road, has developed the virility and courage to correct its mistakes, to capitalize on its successes, and to turn this vital experience into fabricated steel, in the form of boilers.

That vital experience is what you get when you select or specify a Fitzgibbons steel boiler. It is a heritage of sixty years — a hidden but valuable asset that accompanies every boiler leaving the Fitzgibbons plant, and assures its superlative performance.

Fitzgibbons Boiler Company, Inc.

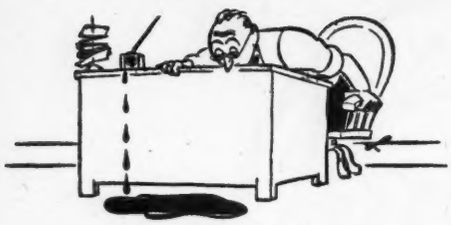
General Offices: 101 PARK AVENUE, NEW YORK 17, N. Y.
Manufactured at: OSWEGO, N. Y.
SALES BRANCHES IN PRINCIPAL CITIES

Member Indoor Climate Institute *Member Steel Boiler Institute*

FITZGIBBONS

ANOTHER WORD FOR COMFORT

fueloil & oil heat



Editorial Leaks

Customers are threatening to bring suit to get oilburner installations in some territories, and are pushing dealers to take orders in most areas. At a time like this, with more business than equipment, it may sound out of place to talk about sales, but there never was a time in the industry's history when more and better sales planning was so badly needed.

There is a flush demand for about 500,000 domestic oilburners according to a consensus of educated guesses. This demand might keep the industry busy for this entire year—or it may not—depending on the public's patience with delay in getting oilburner installations, and the durability of its desire for automatic heat before it buys that new refrigerator or automobile. The one sure way to keep up public interest is to sell and continue to sell. The demand born of shortage and wartime publicity is not self-perpetuating.

It is going to be late to create a sales force when we suddenly come to the end of the present demand. The silence that will fall over the shop when the last order has been filled can wreck a business. Morale falls apart from the front office to the loading platform. Good men get restless and start looking for another job. Stock room grumbling gets louder among idle men.

Sales forces have to be paid, but they are less costly than a pinochle-playing installation crew. This year of 1946 will bring its problems, but a little planning and sales-force building will help to keep those problems small.

◈

Disposition by Government of the two large pipelines built during the war from Texas to the East Coast is still very much up in the air. When the subject was under discussion before the O'Mahoney Committee of the Senate the proponents of putting natural gas in the lines made a lot of headway, particularly when the oil industry committee headed by W. Alton Jones, of Cities Service, recommended this.

There was just one important factor missing in the prospect presented to that committee. The New York, New Jersey and Pennsylvania gas utilities that would have to market the natural gas from the lines showed no inclination to want it, even though various groups of promoters stood ready to buy the lines and refit them for gas.

New York engineers Ford, Bacon and Davis, retained by RFC to advise them on the disposition of the lines recommended that they go to gas, as the only way in which the Government investment could be recovered. They determined that cost would be 25.35 cents per MCF delivered East, if operated at 75% of capacity, carrying 115,000,000 MCF a year.

Texas interests, that a year ago were opposing gas in the lines, because they wanted to keep the product to attract industries to the state, are not now protesting. But the Army-Navy group that has always advocated keeping oil in the lines for national security has now made an impression on Surplus Property Administration to the extent that SPA on January 4 came out with a strong recommendation that the lines be kept for oil.

If the lines cannot carry oil all the way to the East, they point out, they could well serve intermediate points. SPA suggests three methods in order of preference: let the oil industry buy them, particularly small independent operators; lease them if they can't be sold; Government operation on a full cost basis.

The Armed Forces will never agree to abandoning the lines for oil unless they can realize the same degree of security by having huge bombproof emergency storage on the East Coast, for they know that to reconvert the lines to oil from gas would take months, and in the next war there won't be any months to wait.

Also in the event of a national emergency, assuming the lines were on gas, shutting it off overnight would cause immeasurable inconvenience and economic hardship to the industries and homes dependent upon that fuel, with other fuel facilities not immediately available.

Because national security is remote from people's minds when a war is just over, the Armed Forces, with the support of the Surplus Property Administration, may not win their fight when the final decision is made. The lines may go to gas after a couple of years of promoting, financing and reconstruction, but this would be a serious national blunder . . . we do not expect it to happen.

◈

ADD DEFINITIONS—

An Independent: A piece of hide stretched over an insatiable appetite for gallonage: A noise covered with oil.

"Bill Spill"
Atlantic Coast Oil Conference

◈

When, in late November, it became apparent from stock positions and supply forecasts that Eastern States faced this winter a shortage of both kerosene and distillate heating oils several industry men appealed to OPA's Fuel Price Division to take an interest in the problem and see what could be done. After several meetings distillate prices were raised on December 19 .2¢ and kerosene .5¢ at all industry levels from refiner to consumer. This is a temporary expedient, expiring April 30, 1946.

The fuel shortage was brought about by many refiners running too large quantities of gasoline, making the most of their modernized plants and apparently ignoring the obvious fact that excessive gasoline production would soon break the price; this is now evident in some sections of the country. Perhaps PAW's control over refinery yields was shut off too soon; relieved of this control refiners by the dozen stuck their heads in the sand and threw gasoline production into high. The largest refiners, primarily Eastern majors, did not take this course but held their individual output balanced to their anticipated needs.

For some time it has been common knowledge that gasoline demand after the war would be probably 20% below 1941 because of fewer cars on the streets, with 40% of those still running being too ancient to go far. It now looks like the small refiners were working a squeeze play on the big ones. When gasoline became too plentiful they believed the big refiners would cut their yields to forestall a price slump and let the little ones go merrily on. Also, small refiners did not have a fuel-

(*Continued on page* 121)

Sam can do a job for you this year —

AT the threshold of a new year, it's a good idea to pause for a brief inventory of the past and an estimate of the future.

Looking back more than twenty years we see ourselves, practically starting from scratch, with the single idea of "Doing One Thing Well"—just making good, dependable boiler water feeders and low water cut-offs. And still looking back, we realize that it was far easier to make good equipment than to sell the idea of *using* it!

But we did sell the idea, and we have never deceived ourselves that it took two factors to sell it: It took quality equipment—and it took YOU. Through your good efforts in the worthy cause of boiler protection the idea has gained ground year after year until it has been written into boiler codes, required by insurance companies, made compulsory by ordinances.

A few years ago, good old Sam joined us, and the Sam-you-better-scram-idea has helped to further the cause of protection from low water. Through the war, the Sam-you-better-scram-idea received highest confirmation, won new laurels.

So, looking forward, there is every reason to believe that the boiler protection idea will continue to gain ground in '46. Sam and the equipment he symbolizes can do a job for you this year!

Products covering a wide range of needs are listed opposite. Ask for condensed catalog and price list.

McDONNELL & MILLER, *Inc.*, 1310 Wrigley Bldg., Chicago 11, Ill.

Doing One Thing Well

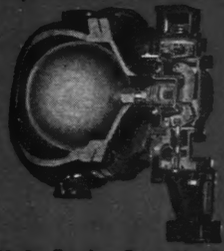
REG. U. S. PAT. OFF.

Let Jobber Stocks Them

McDONNELL

Boiler Water Level Controls

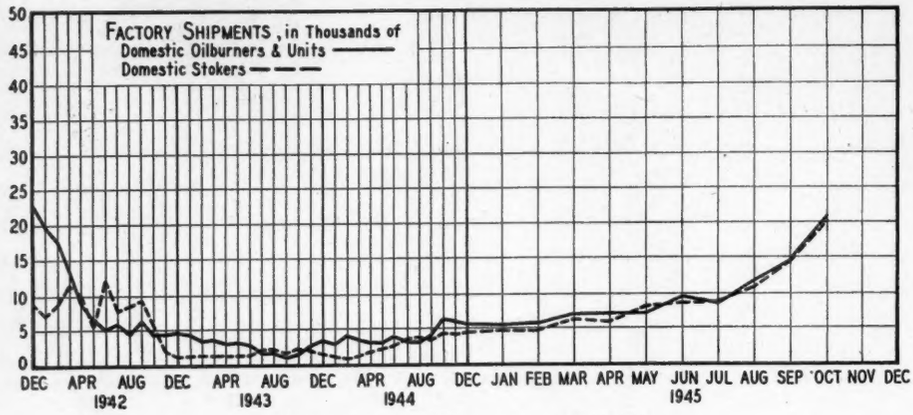
No. 47-2 Feeder-Cut-off Combination for boilers below 5000 sq. ft.; maximum steam pressure, 25 lbs. Quick-Hook-Up for speedy, correct installation.



No. 51-2 Feeder-Cut-off Combination. Functions same as 47-2, but for boilers larger than 5000 sq. ft.; maximum steam pressure, 35 lbs.

No. 67 Low Water Cut-off for all automatically fired boilers; maximum steam pressure, 25 lbs.

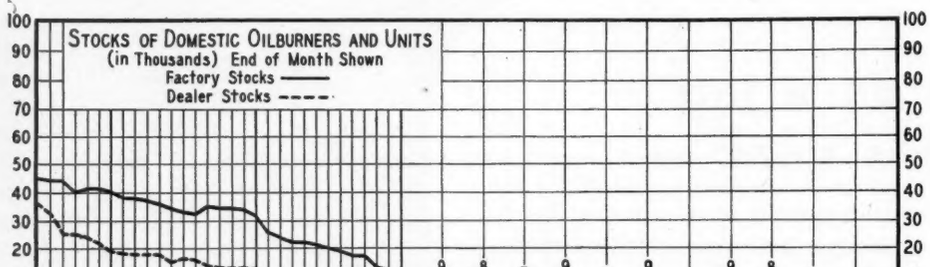
No. 150 Water Level Control for boilers of any size with steam pressures up to 150 lbs. Used as feed-pump control; low-water cut-off; low water alarm, or any combination of these functions.


FACTORY SHIPMENTS, in Thousands of
Domestic Oilburners & Units
Domestic Stokers
DEC APR AUG DEC APR AUG DEC APR AUG DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1942
1943
1944
1945

Shipments of Oilburners and Units

Adjusted to include manufacturers other than the 124 reporting to Census Bureau, FUELOIL & OIL HEAT's estimates of shipments are:

	OCTOBER			TEN MONTHS		
	1945	*1944*	*Percent Change*	*1945*	*1944*	*Percent Change*
Conversion	17,950	4,396	+308.3	81,029	28,190	+187.4
Boiler units	514	957	— 46.3	6,153	4,803	+ 28.1
Furnace units	3,008	1,053	+185.7	11,438	4,108	+178.4
All domestic	21,472	6,406	+235.2	98,620	37,101	+165.8
Commercial	2,413	2,478	— 2.6	29,347	26,662	+ 10.1
Total	23,885	8,884	+168.9	127,967	63,763	+100.7


STOCKS OF DOMESTIC OILBURNERS AND UNITS
(in Thousands) End of Month Shown
Factory Stocks
Dealer Stocks
JUN SEP DEC APR AUG DEC APR AUG DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1942
1943
1944
1945

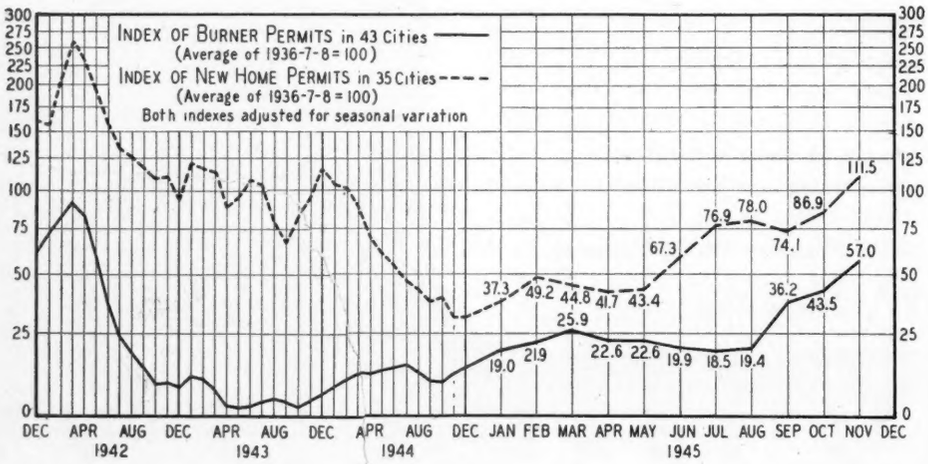
November Minimum Retail Prices: Key Dealers

	CONVERSION BURNERS		BOILER-BURNERS		FURNACE-BURNERS	
	*Top price**	*Low price*	*Top price**	*Low price*	*Top price**	*Low price*
Highest	$398	$...	$645	$...	$650	$385
Lowest	220	...	425	...	415	340
Nov. Aver.	276	...	526	...	496	388
Oct. Aver.	275	183	555	...	481	358

*Top price key dealers for conversion burners are those whose minimum retail prices are $200 or more, for boiler-burner and furnace-burner units (exclusive of ductwork) those whose minimums are $400 or over.

Price Index: Conversion Burners: January 1940 is 100%

	WHOLESALE				RETAIL			
November	119.0	Six months ago	115.6	November	117.6	Six months ago	114.3
October	116.0	Year ago	113.3	October	117.2	Year ago	117.0


INDEX OF BURNER PERMITS in 43 Cities
(Average of 1936-7-8 = 100)
INDEX OF NEW HOME PERMITS in 35 Cities
(Average of 1936-7-8 = 100)
Both indexes adjusted for seasonal variation
DEC APR AUG DEC APR AUG DEC APR AUG DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1942
1943
1944
1945

Oilheating Trends

INSTALLATION OF DOMESTIC oilburners and units in November are estimated at 25,356, or four times the number installed in the same month of 1944. November sales, based on reports from representative key dealers, were about 51,500, adding another large slice to the undelivered backlog that has been piling up since early fall. Many dealers have stopped taking new orders, to get away from the telephone pressure that comes with long delays. With factory shipments pointing up sharply, in spite of trouble getting motors and castings, and with many householders resigned by now to another winter with coal, the backlog of dealer orders should be well worked down before spring. November sales of reporting dealers were divided: 70% conversion burners, 17% boiler-burner units and 13% furnace-burner units.

BURNER STOCKS: In dealer hands on November 30 were approximately 5,920 domestic burners and units, or considerably less than an average of one to a dealer and this represents, in effect, no stocks. Factory stocks on October 31, the latest available data, were 4,216, mostly odds and ends of special sizes.

SERVICE INCOME: November average service department incomes of reporting dealers were $3,018, down five per cent from $3,173 for the same group a year ago. There probably was no actual decline in the amount of normal service work being done, and the decline can be attributed to the fact that sales departments are being revived, and replacement burners are no longer credited to the service department by most companies.

HOLDING BURNER ORDERS: Because several dealers had mentioned having to accept cancellations and return the cash payment on some burners where installation was long delayed, the reporting group was asked this month for comments on this situation. A few more than a third of the dealers have had to send back money on cancellations, and if their experiences have been typical of the industry, about 7,000 such cash-return transactions have occurred. The loss of this business is trivial in view of the many people wanting to place orders, but it creates a difficult situation with the salesmen who took the orders, for often they had collected commissions and the dealer

must either get back this money or make an outright donation of it, either of which is monkey-business. Five-eighths of the dealers reporting take back the commission from the salesman, the others let him keep it, usually in instances where they made delivery promises to the sales force and couldn't meet them. Only a few dealers believe they can get many of these cancelled orders reinstated, the overall average expectancy being about one in eight, with the other seven orders going to competitors.

OIL SUPPLY AND PRICE: With the winter supply outlook in the East fairly tight, due to refiners running too high a fraction of gasoline from the crude, 28% of New England fueloil distributors say they are having considerable difficulty getting enough distillate for their needs; 10% in Middle Atlantic states report trouble. There is no supply problem in the Midwest or far West. Reporting weak gasoline prices in their communities are 16% of oil men from New England, 28% in Middle Atlantic areas and 20% from the Midwest. Fueloil prices are also being cut to a small extent in the Mid Atlantic and Midwest States with 27% and 21% of dealers, respectively, noticing it in their markets. They point out, however, particularly in the East, that price cutting is by small new operators, trying to get a start, and that it has not become serious. The Pacific Northwest sees some price cutting on fueloil, usually to new oil users.

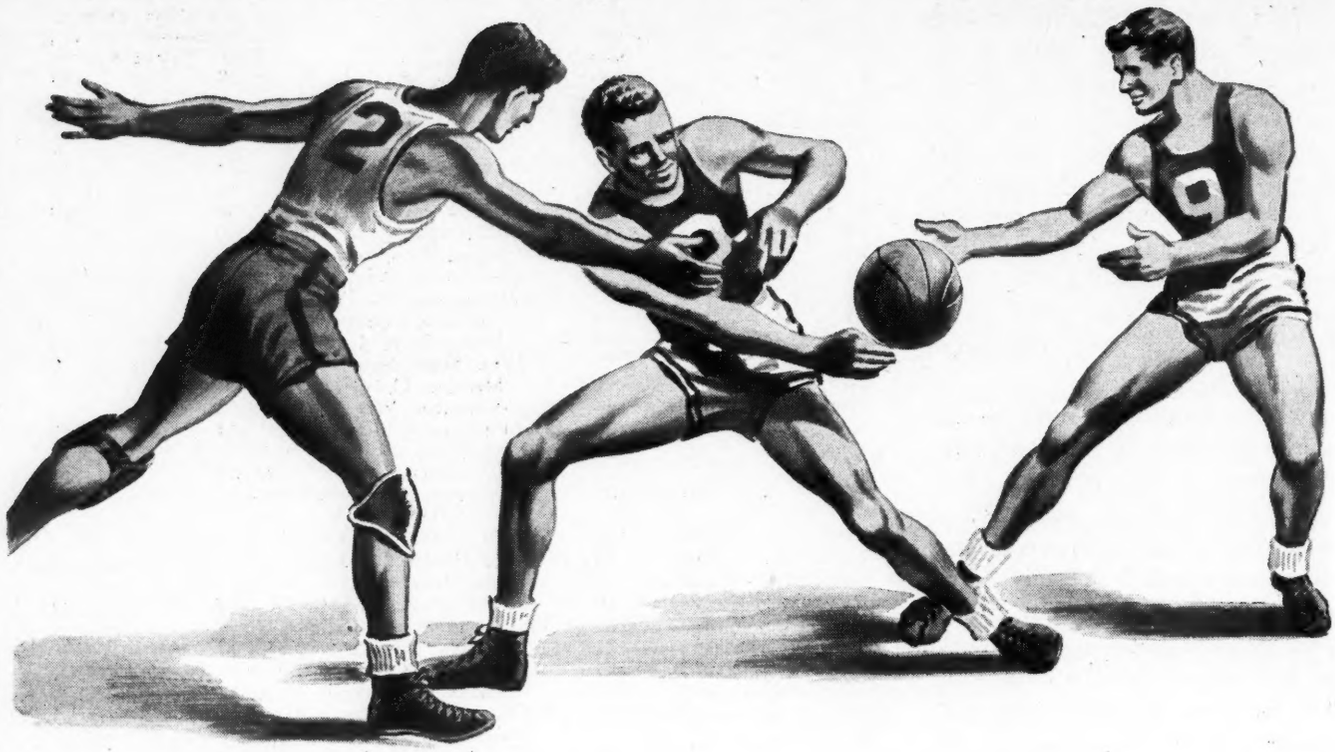
The fueloil supply stringency is not helped by the larger demand for new burner installations and reconversions, plus colder than normal weather in several large markets. Reporting dealers expect that new customers thus far in the season will raise their fueloil gallonage by an average of 9% over last season.

SERVICE PRICES: Noticing some little inclination toward a revival of free service, and a few instances where service charges were obviously low, questions were asked this month on local service situations. Of all dealers reporting on this, 42% are satisfied with service practices and charges in their communities. The others have quite a number and variety of complaints, with 32% saying that they encounter some free service competition, rather spotty, and most are not greatly concerned about it. They generally attribute it to small new oil dealers, with a few other specific examples, such as: "Our competition gives free burner service on accounts using over 5,000 gallons —nice people" . . . "Serious consideration being given to eliminate free service, which has been the general policy in this city (Midwest)" . . . "Coal companies are installing reconversions free to get the oil business" . . . "One major oil company subsidiary (Mid Atlantic) gives free parts with oil business" . . . "Two other majors are offering a free fill signal with new business" . . . "One major oil company uses contract drivers on a commission basis; these drivers are offering free service, but since they don't know much about it, the idea doesn't get across very well" . . . "While we have no free service, some dealers use extra low service prices to get oil business, but not yet serious enough to affect the general situation" . . . "No free service yet, but new men in the business are working pretty cheap, as little as $1.50 per call" . . . "No free service, but a major oil company reinstalls burners for prewar customers without charge"

Oilburner* and Building Permits

OILBURNERS					DWELLINGS			
November		11 MONTHS			November		11 MONTHS	
1945	1944	1945	1944		1945	1944	1945	1944
..	..	..	..	Baltimore, Maryland	126	19	457	120
..	..	..	..	Binghamton, New York	1	0	36	1
301	86	..	492	Boston, Massachusetts	9	0	23	0
102	9	371	114	Bridgeport, Conn.	..	..	..	..
..	..	..	..	Buffalo, New York	24	0	52	45
..	..	..	..	Des Moines, Iowa	11	0	96	12
102	12	..	194	Detroit, Michigan	506	9	2428	2444
46	4	143	25	Elizabeth, N. J.	0	0	..	..
27	7	145	48	Freeport, New York	..	..	..	..
..	..	..	..	Greenwich, Conn.	14	0	15	2
..	..	..	..	Hackensack, N. J.	0	0	62	0
145	12	603	77	Hartford, Conn.	..	..	..	..
24	4	107	14	Irvington, N. J.	5	0	3	8
..	..	..	..	Lynn, Massachusetts	3	0	7	1
26	..	..	..	Meriden, Conn.	..	..	..	..
90	10	245	43	Milwaukee, Wisc.	62	25	..	247
66	32	681	206	Minneapolis, Minn.	134	54	657	118
25	3	99	29	Montclair, N. J.	..	..	..	..
..	..	..	..	Morristown, N. J.	0	0	1	0
50	19	244	102	Mt. Vernon, New York	..	..	..	..
181	..	..	..	Newark, New Jersey	..	..	..	..
65	27	336	147	New Bedford, Mass.	..	..	..	..
25	11	191	38	New Haven, Conn.	..	..	..	..
6	0	0	3	New Orleans, La.	..	..	..	..
36	5	183	19	New Rochelle, N. Y.	14	0	11	1
339	55	..	265	Manhattan, Bronx, Rchd	..	..	..	..
51	2	..	21	Norfolk, Virginia	14	3	59	13
1	3	3	7	Oakland, Calif.	..	..	..	..
58	20	216	152	Omaha, Nebraska	28	20	276	367
14	2	85	3	Orange, New Jersey	0	0	1	0
28	..	..	..	Passaic, New Jersey	..	..	..	..
37	15	234	56	Paterson, N. J.	1	1	3	3
..	..	..	..	Plainfield, N. J.	9	0	17	7
35	12	233	34	Portland, Maine	8	1	5	4
332	4	1472	165	Portland, Oregon	50	3	460	434
9	..	..	..	Poughkeepsie, N. Y.	..	..	..	..
33	16	166	..	Providence, R. I.	2	1	20	2
..	..	..	..	Reading, Penna.	5	0	22	0
49	0	77	0	Richmond, Virginia	99	3	559	198
19	0	..	0	Rochester, N. Y.	..	..	..	..
26	4	97	33	Rockville Center, N. Y.	5	0	4	0
12	22	61	29	Salem, Massachusetts	1	0	4	0
45	13	173	65	St. Louis, Missouri	14	0	31	0
129	48	366	139	St. Paul, Minnesota	47	27	471	82
31	2	..	17	Schenectady, N. Y.	..	..	..	..
..	..	..	..	Seattle, Washington	100	52	1243	1152
..	..	..	..	Springfield, Mass.	19	1	177	15
34	9	..	35	Stamford, Conn.	..	..	..	..
17	0	..	8	Syracuse, New York	9	1	93	22
..	..	..	..	Trenton, New Jersey	1	0	5	8
..	..	..	..	Utica, New York	1	1	8	31
151	25	494	159	Washington, D. C.	..	..	..	..
..	..	..	..	West Orange, N. J.	4	0	13	0
54	14	202	67	White Plains, N. Y.	4	0	6	0
35	3	139	22	Wilmington, Delaware	12	0	10	10
32	39	303	169	Worcester, Mass.	..	..	..	..
0	16	..	92	Yonkers, New York	..	..	..	..
2638	565	7503	1965	*Totals*	1342	218	7335	5100
+366.9		+281.8		*Percent Change*	+515.5		+43.8	

*Permits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax. Rightly used, however, they are a useful working index.



TEAMWORK

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Distributors of Atlantic's clean-burning furnace oil have the advantage of a superior product, backed by 75 years' experience in refining outstanding petroleum products. Atlantic's marketing know-how is always available to distributors.

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New Haven, Conn.
Newark, N. J.
Williamsport, Pa.
Northumberland, Pa.
Mechanicsburg, Pa.
Allentown, Pa.
Reading, Pa.
Trenton, N. J.
Philadelphia, Pa.
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Baltimore, Md.
Richmond, Va.
Wilmington, N. C.
Brunswick, Ga.

Oilheating Starts Back

Domestic Installations Reach 145,600 in Warm-Up Year

OILHEATING STARTED TO WARM UP for a prosperous future in the last six months of 1945, though domestic oilburner installations failed to reach the 1935 level. Beset by shortages of labor and materials, the industry installed 145,596 domestic oilburners and units, and 30,900 commercial and industrial burners, though retail sales ran far ahead of available burners. It is estimated that the industry made close to 200,000 retail domestic oilburner sales during the year, and could have sold many more, but lack of equipment made dealers afraid to accept orders.

Domestic burners and units operating at the end of the year reached an all-time high of 2,525,655, an increase of 5.5% for the year. Commercial heating installations totalled 30,515 for the year against 30,705 in 1944. Commercial heating jobs operating at the end of 1945 had reached 345,090, up 7.6% from 320,680 at the end of 1944.

Domestic oilburner installations operating now account for 52.89% of the total automatic heating installations. The following table shows the domestic oilburners, gasburners and stokers operating at the end of 1945, and the comparative percentages in the two prior years.

Operating 12/31/45		*1945 %*	*1944 %*	*1943 %*
2,525,655	Oilburners	52.97	53.55	53.69
1,160,150	Gasburners	24.33	24.67	24.79
1,082,700	Stokers	22.70	21.78	21.51

Table 1 shows the domestic oilburner and unit sales by years since 1930, and the number of burners operating at the end of each year.

Of the total domestic oilburners and units installed in 1945, only 6,406 or 4.4% went into new buildings. There is little hope that new home installations will reach prewar levels until building volume increases, and in spite of governmental urging, there is little evidence of any building boom in the immediate future.

Replacement of coalburning equipment accounted for 94,346 domestic oilburner installations, or 54.8% of the total domestic oilburner business. Of these installations, 84,737 replaced handfiring, and 9,610 or 6.6% of the total for the year, replaced domestic stokers. There also were 728 gasburners replaced by oil.

Replacement of old oilburners took 29,847 installations, or 20.5% of the year's total. This is only 53% of the normal requirement of 56,315 replacements, and leaves an indicated total of more than 176,300 replacements which normally would have been made during war years, but have been put off until more equipment is available. With the increasing age of the average domestic burner, it is to be expected that this annual requirement will rise.

TABLE 1

DOMESTIC CONVERSION BURNERS AND UNITS

Sales	*Retail Value*	*Factory Value*	*Year*	*No. in Use (End of Year)*
126,400	.....	.....	1930	648,500
104,000	.....	.....	1931	747,300
89,200	.....	.....	1932	831,120
88,600	.....	.....	1933	914,280
108,290	.....	.....	1934	1,112,870
150,510	$55,342,500	.....	1935	1,152,125
220,075	74,054,700	.....	1936	1,340,675
210,740	69,265,100	$22,238,200	1937	1,530,545
179,360	54,583,900	18,292,900	1938	1,667,745
236,140	66,520,400	23,352,200	1939	1,862,330
302,210	89,548,800	32,273,600	1940	2,135,125
333,250	113,546,400	41,931,800	1941	2,402,060
99,514	29,871,600	14,067,900	1942	2,386,290
33,445	5,283,300	5,431,000	1943	2,375,455
49,915	17,988,300	7,652,000	1944	2,392,265
145,596	49,245,200	17,845,400	1945	2,525,655

TABLE 2

DOMESTIC CONVERSION OILBURNERS

Sales	*Retail Value*	*Factory Value*	*Year*	*No. in Use (End of Year)*
126,400	$79,400,000	$24,648,000	1930	648,500
104,000	50,310,000	16,640,000	1931	747,300
86,200	36,911,000	12,068,000	1932	827,320
80,800	31,263,000	10,423,000	1933	902,680
98,990	33,116,000	11,681,000	1934	991,980
136,825	43,373,500	13,408,900	1935	1,115,125
197,430	59,229,000	18,558,400	1936	1,281,305
184,920	54,181,600	15,903,100	1937	1,446,295
153,850	40,462,600	12,154,200	1938	1,559,675
200,020	48,004,800	15,601,600	1939	1,719,940
238,845	55,645,900	18,152,200	1940	1,933,605
237,965	59,490,200	19,275,200	1941	2,113,160
71,658	16,552,700	6,090,900	1942	2,073,260
21,363	1,885,800	1,837,200	1943	2,060,465
37,885	10,607,800	4,184,600	1944	2,072,445
119,680	34,292,200	11,249,900	1945	2,182,510

TABLE 3

INTEGRAL BOILER-BURNER UNITS

Sales	Retail Value	Factory Value	Year	No. in Use (End of Year)
3,000	.....	.....	1932	3.800
7,800	.....	.....	1933	11,600
9,300	.....	.....	1934	20,890
10,510	$9,511,600	.....	1935	31,400
15,025	9,781,300	.....	1936	46,250
14,430	8,557,000	$3,795,100	1937	60,240
14,220	7,877,900	3,711,400	1938	73,930
19,220	9,744,500	4,286,100	1939	92,540
26,955	13,322,700	5,005,300	1940	118,560
39,990	21,874,500	9,717,600	1941	155,720
9,313	5,289,800	2,877,700	1942	163,040
6,637	1,705,600	2,090,600	1943	164,240
6,440	3,909,100	2,002,800	1944	167,040
9,027	5,984,900	2,491,500	1945	175,165

Retail value of domestic oilburners and units sold last year reached $49,245,200, the best year since 1941, but still below any year prior to 1941 since records have been kept. Factory value of these burners and units totalled $17,845,400. Figures by years on retail and factory value are shown in Table 1.

Reconversions of domestic burners that had changed to coal during the war brought back 47,058 burners during the year, of which 32,790 were reinstallations of old burners, and 14,268 were new equipment. With the 25,004 burners which were reconverted to oil before the start of 1945, the total reconversions now stand at 72,062, or 62.7% of the 114,882 burners that were taken out. The remaining 42,820 converted installations are in an uncertain status, but some of them probably will be back to oil as equipment becomes more easily available.

The total 145,496 domestic oilburners included 119,680 conversion burners, or 82.2%; 9,027 boiler-burner units, or 6.2%, and 16,889 furnace-burner units, accounting for 11.6% of the total. The following table gives for comparison a break-down of the conversion burner and unit sales in the last three years against the five-year prewar average.

Prewar		1945 %	1944 %	1943 %
80.5%	Conversion Burners	82.2	75.9	62.8
9.1	Boiler-Burn. Units	6.2	12.9	19.8
10.4	Furnace-Burn. Units	11.6	11.2	16.3

War years hardly can be taken as a part of the trend for the future, but it is interesting to note that conversion oilburners have started the postwar comeback slightly stronger than the prewar average. It probably will not continue when boiler and furnace units are readily available.

Domestic Burner Types

Types of domestic burners and units sold during 1945 also reflect the availability of equipment—and the lack of it. High pressure burners of the gun type and gun type low pressure burners made gains over their prewar position at the expense of vertical rotary and vaporizing equipment. There is no way to estimate exactly how much of this gain is due to the availability of these types of burners, and how much is due to dealer preference. Since dealer stocks have been at an irreducable minimum during the entire year, practically the entire year's installations had to be made from shipments, and those manufacturers who could make shipments got the business. Since all manufacturers had more orders than they could supply, it seems probable that availability of equipment is the strongest factor in the figures.

High pressure burners were used on 112,629 of the installations last year, accounting for 77.4% of the total. Low pressure burners were next with 16,347 installations, or 11.2%, slightly ahead of vaporizing pot-type equipment with 14,342 installations or 9.8%. Vertical rotary burners were used on only 2,278 installations during the year to take only 1.6% of the business. The accompanying table presents a comparison of 1944 and 1945 with the five-year prewar average for each class of equipment.

1945 %		1944 %	Prewar Avg. %
112,629	77.4 Hi. Pres.	72.7	71.7
16,347	11.2 Lo. Pres.	11.3	6.2
2,278	1.6 Vert. Rot.	8.8	11.0
14,342	9.8 Vaporizing	7.2	10.8

Before the war there were a few horizontal rotary "pup" burner used in domestic installations, accounting for 0.3% of the average. These have not been available in sufficient quantities to measure during the war years.

It also should be noted that vaporizing equipment shown here is only that sold for central heating and does not include space heaters, floor and wall furnaces or water heaters.

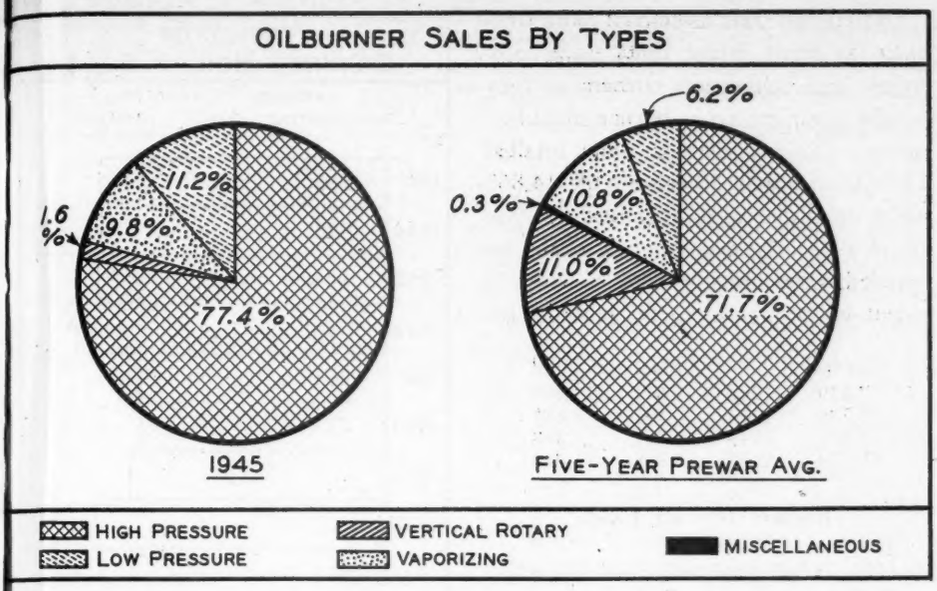
Domestic Conversion Burners

There were 119,680 conversion burners used last year, representing 82.2% of all domestic burners and units installed. Of these 98,541 were high pressure accounting for 82.4% of all conversion burners. There were 13,671 low pressure burners, or 11.4%; 5,345 vaporizing burners, or 4.5%, and 2,123 vertical rotary, or 1.7% of conversion burners. The percentage of high pressure burners in the total again shows the relative availability of this type of burner during the year. Other types are principally made by manufacturers who were deep in war

TABLE 4

INTEGRAL FURNACE-BURNER UNITS

Sales	Retail Value	Factory Value	Year	No. in Use (End of Year)
3,175	$2,457,400	.....	1935	5,600
7,620	5,044,400	.....	1936	13,120
11,390	6,526,500	$2,540,000	1937	24,010
11,290	6,243,400	2,427,300	1938	34,140
16,900	8,771,100	3,464,500	1939	49,850
36,410	19,115,300	7,646,100	1940	82,960
55,295	32,181,700	12,939,000	1941	133,180
18,543	8,029,100	5,099,300	1942	149,990
5,446	1,691,900	1,503,200	1943	150,750
5,590	3,471,400	1,464,600	1944	152,780
16,889	8,968,100	4,104,000	1945	167,980



work most of the year, and did not get reconverted to oilburner production in time to produce many burners. High pressure burner production by small manufacturers had been encouraged by the War Production Board as a means of supplying necessary replacements, and the figures reflect the output of numerous small plants. Conversion burners were 87.5% of total high pressure burners used.

Conversion burners operating at the end of 1945 had increased 5.3% from the year before to a new high of 2,182,510 installations. Besides the new burners installed, there were 32,790 reinstallations of converted jobs during the year, which lifted the total more than normally would have been expected.

Average retail price of conversion installations went up 11.8% in 1945 to $313, but the average minimum price dealers got for their competitive installations went up more than 13% to reach $292. This narrows the range of retail prices another dollar to a difference of only $21 between the average price for all installations and the low-price jobs. This contrasts with a difference of $138 in 1929, $113 in 1930, and $82 in 1931, since which time prices have continued to come together. Average price for replacements during the year was $234, compared to $211 in 1944, and $201 in 1943. Replacement price ranged from an average of $191 on the Pacific Coast to $236 in the Middle West. Retail value of conversion burners last year was $34,292,200, as shown in Table 2.

Factory value of conversion burners, also shown in Table 2, totalled $11,249,900. Average factory prices, however, present a curious picture. The average price paid the manufacturer in 1945 dropped more than 4% to $94. Low-price equipment in the meantime increased in price 7.7% to $84. Again, this reflects the availability of low-price equipment offered by the smaller manufacturers. Low-price equipment volume represented so much of the total that, in spite of stiffening prices, the average price paid for all conversion burners was reduced.

This situation is further shown in the average price paid for the different types of oilburners last year, compared with 1944. While the average price of low pressure, rotary and vaporizing conversion burners stood still, the average paid for high pressure burners was off 8.2% to $90. Dealers who formerly had bought only "Name" burners were forced to buy whatever was available at lower prices than usually paid for their regular lines.

The table below shows the average wholesale and retail prices of the various types of conversion burners in 1945 and 1944.

Retail 1945	Retail 1944		Wholesale 1945	Wholesale 1944
$305	$269	Hi. Pres.	$ 90	$ 98
381	346	Lo. Pres.	120	120
362	329	Vert. Rot.	123	123
215	196	Vaporizing	65	65

Retail and wholesale prices, both average and average minimum for conversion burners, is shown for the last seventeen years in Table 5. Conversion burners accounted for 70% of the retail value of all domestic burners and units installed last year, and was 63% of the total factory value.

Integral Boiler-Burner Units

The 9,027 factory-assembled boiler-burner units installed in 1945 represented an increase of 40.2% from the year before when 6,440 units were installed. Of the total, 6,995, or 77.5% were fired with high pressure oilburners (6.2% of the total high pressure burners used), and 1,931, or 21.4% of the units were fired with low pressure burners (11.8% of the low pressure oilburners). There were 95 integral boiler units fired with vertical rotary burners and 6 complete vaporizing boiler units.

Complete boiler units operating at the end of the year had increased 4.8% to 175,165. Figures on boiler unit sales and number operating at the end of each of the last fourteen years are shown in Table 3.

Fifteen percent of the integral boiler units in 1945 were cast iron and 85% were steel. This factory-assembled equipment, however, took only 6.7% of the cast iron boilers that were oilfired during

Table 5. Conversion Burner Price Trends

Retail Average	Retail % change prev. yr.	Retail Aver. Min.	Retail % change prev. yr.		Factory Average	Factory % change prev. yr.	Factory Aver. Min.	Factory % change prev. yr.
$692	..	$554	..	1929	$240	..	..	..
629	— 9.1	516	— 6.8	1930	195	—18.7	..	..
495	—21.3	413	—19.9	1931	160	—18.0	..	..
438	—11.5	371	—10.1	1932	140	—12.5	..	..
395	— 9.8	341	— 8.1	1933	129	— 7.8	$109	..
341	—13.6	310	— 9.0	1934	118	— 8.5	99	— 9.1
317	— 7.0	275	—11.2	1935	98	—16.9	88	—11.1
300	— 5.3	266	— 3.2	1936	94	— 4.1	85	— 3.4
293	— 2.3	255	— 2.6	1937	86	— 8.5	82	— 3.5
263	—10.2	236	— 7.4	1938	79	— 8.1	76	— 7.3
240	— 8.7	218	— 7.6	1939	78	— 1.3	69	— 9.2
233	— 2.9	210	— 3.7	1940	76	— 2.6	63	— 8.7
250	+ 7.2	226	+ 7.6	1941	81	+ 6.9	65	+ 3.2
267	+ 6.8	245	+ 8.4	1942	85	+ 4.9	73	+12.3
276	+ 3.3	247	+ 0.9	1943	86	+ 1.2	76	+ 4.1
280	+ 1.4	258	+ 4.7	1944	98	+13.9	78	+ 2.6
313	+11.8	292	+13.2	1945	94	— 4.1	84	+ 7.7

Table 6. Prices of Factory-Assembled Boiler-Burner Units

Aver-age	% change prev. yr.		Aver. Min.	% change prev. yr.
		RETAIL		
$905	...	1935	$723	...
651	—28.0	1936	566	—21.7
593	— 8.9	1937	516	— 8.8
554	— 6.5	1938	482	— 6.6
507	— 8.3	1939	441	— 8.5
495	— 2.4	1940	365	—17.2
547	+11.5	1941	378	+ 3.6
568	+ 3.8	1942	473	+25.1
533	— 6.2	1943	361	—23.7
607	+13.9	1944	450	+24.6
663	+ 9.2	1945	539	+19.8
		FACTORY		
$263	...	1937	$246	...
261	— 0.7	1938	244	— 0.8
223	—14.5	1939	208	—14.7
215	— 3.6	1940	183	—12.0
243	+13.0	1941	201	+ 9.9
309	+27.1	1942	229	+13.4
315	+ 2.0	1943	231	+ 1.0
311	— 1.3	1944	216	— 6.5
276	—11.2	1945	233	+ 7.9

the year, and 69.9% of the new steel boilers that were oilfired.

The average retail price of a complete, factory-assembled boiler-burner unit installed without extra piping or other heating work was $663, up 9.2% for the year, compared to $607 in 1944. Minimum price unit installations sold for 19.8% more than in the year before, reaching $539, the highest price of competitive units since 1936. The total installed value of integral boiler units last year was $5,984,900, up 50.6% over 1944. Retail value of boiler units for the last eleven years is presented in Table 3.

Factory prices of boiler units follow roughly the same pattern as that for conversion oilburners. Minimum price units increased 7.9% to $233 during the year, and represented such a large part of the total unit sales volume that the average price paid for all boiler units was actually reduced more than 11% to $276. Again, as with conversion burners, "Brand" units were not available in normal quantities, and dealers used what was available—mostly inexpensive steel units. Of all boiler units 77.5% were fired with high pressure burners. The spread in factory price between competitive boiler units and the average for all units narrowed during the year from $95 to only $43.

Factory value of boiler units in 1945 increased only 24.4% over 1944 to $2,491,500, in spite of an increase of more than 40% in volume. Figures on factory value of boiler-burner units in recent years are shown in Table 3.

Dealers last year assembled more than twice as many boiler units using new boilers and conversion burners as they bought complete from burner manufacturers. Dealer-assembled units totalled 22,040, up nearly 50% over the 14,868 boiler units that were assembled by dealers in 1944. A break-down of dealer-assembled boiler units by type of boiler in recent years is given in the table below.

Cast Iron		*Steel*	*Total*
7,039	1942	1,651	8,690
2,240	1943	595	2,835
13,377	1944	1,491	14,868
18,734	1945	3,306	22,040

Boilers for all Fuels

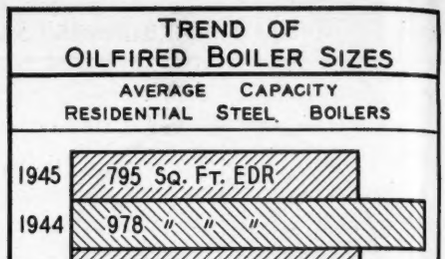
Total boiler sales last year amounted to 82,748, of which 66,740 were cast iron and 16,008, or slightly less than 20% were steel. This represents an increase of less than 5% for the year, but cast iron boiler sales showed a loss of 15% compared with 1944. Dealers in many instances have reported inability to get cast iron boilers at all.

Oilfired boilers totalled 31,067 units, or 37.8% of the total. This compares with 27% of all boiler sales in 1944 which were oilfired.

Cast Iron boilers in 1945 accounted for 80.7% of all boilers sold, compared with 95.8% in 1944. The last five prewar years cast iron boilers represented 87.9% of all boiler sales. Cast iron boilers for oil were up 5% to 20,088 for the year, amounting to 30.1% of all cast iron boilers, the nearest approach to the prewar

Table 7. Boiler Sales

	Total Output	*No. for oil*	*% for oil*
	CAST IRON		
1935	160,105	29,310	18.3
1936	186,560	41,922	22.5
1937	169,707	58,462	34.2
1938	135,282	54,139	40.0
1939	146,919	61,070	41.6
1940	168.839	77,764	46.1
1941	178,076	80,176	45.0
1942	111,875	10,765	9.6
1943	81,500	8,852	10.9
1944	75,760	19,140	25.3
1945	66,740	20,088	30.1
	STEEL		
1935	14,415	14,181	98.1
1936	19,242	18.622	96.8
1937	16,569	15,321	92.7
1938	19,098	17,218	90.3
1939	23,658	21,857	92.4
1940	24,580	23.206	94.5
1941	25,666	24,173	94.2
1942	13,000	7,238	55.7
1943	3,550	1,230	34.7
1944	3,310	2,168	65.5
1945	16,008	10,979	68.6


TREND OF
OILFIRED BOILER SIZES
AVERAGE CAPACITY
RESIDENTIAL STEEL BOILERS
1945 795 Sq. Ft. EDR
1944 978 " " "
1943 808 " " "
1942 862 " " "
1941 685 " " "
1940 683 " " "
1939 711 " " "
1938 813 " " "
1937 862 " " "
1936 906 " " "

average of 43% of cast iron boilers for oilfiring.

Steel boilers, including steel units for commercial heating, were 19.3% of the total boiler sales in 1945, against the prewar average of 12.1%. Oilfired steel boilers climbed back to 10,979 units, the best since 1941, though this volume amounted to only 68.6% of all steel boilers. Boiler statistics for the last eleven years are given in Table 7. Commercial steel boilers amounted to 5,005 units, or 31.3% of the 1945 steel total.

With the end of the war and the approach of more normal operations, the trend is toward smaller size boilers. The average residential oilfired steel boiler capacity declined nearly 20% in 1945 to 795 sq. ft. EDR from the average of 978 sq. ft. in 1944. A comparison of residential steel boiler sizes for the last ten years is shown in the accompanying chart.

Domestic Furnace-Burner Units

Factory - assembled furnace - burner units in 1945 were up more than 200% to 16,889, against 5,590 in the year before. These units were 11.6% of all oilfired equipment installed, compared with 11.% in 1944 and 16.3% in 1943.

Integral furnace units operating at the end of the year had increased 10% to 167,980, as shown in Table 4.

High pressure burners were used with 7,093 of these units, or 42%. Low pressure burners fired only 745 of the units, or 4.4%, and vertical rotary burners fired

Table 8. Price Trends of Factory-Assembled Forced-Air Units

Aver. age	% change prev. yr.		Aver. Min.	% change prev. yr.
		RETAIL		
$774	...	1935	$642	...
662	—14.4	1936	576	—10.2
573	—13.4	1937	499	—13.3
553	— 3.5	1938	481	— 3.4
519	— 6.2	1939	402	—16.4
525	+ 1.2	1940	360	—10.4
582	+10.9	1941	402	+11.7
611	+ 4.9	1942	413	+ 2.7
613	+ 0.3	1943	418	+ 1.2
621	+ 1.3	1944	434	+ 3.8
531	—14.5	1945	479	+10.4
		FACTORY		
$223	...	1937	$210	...
215	— 3.6	1938	204	— 2.8
205	— 4.7	1939	198	— 2.9
210	+ 2.4	1940	196	— 2.0
234	+11.4	1941	201	+ 2.5
275	+17.5	1942	236	+17.4
276	+ 0.4	1943	241	+ 2.1
262	— 5.1	1944	217	— 9.9
243	— 7.3	1945	239	+10.1

only 60 integral furnace units. More than half the complete factory-assembled warm air units for oil were equipped with vaporizing burners, and this volume accounted for 62.7% of all pot-type equipment used for central heating.

This predominance of pot-type warm air equipment in 1945 probably accounts for the fact that the average retail and wholesale prices for furnace units went down. Average retail price was down 14.5% to $531 from $621 in the year before. Minimum prices for competitive units, however, were up 10% to $479.

Factory price for oilfired warm air units averaged 7.3% lower at $243, though the average minimum price was up 10% to $239. The weighted average for all furnace units at wholesale was only $4 more than the average price of competitive low-cost units. Detailed figures on prices since 1935 are shown in Table 8.

Retail value of integral furnace-burner units sold last year was $8,968,100, up 160% over 1944. Factory value also increased sharply on the greater sales to $4,104,000. Comparative figures for recent years are shown in Table 4.

Table 9. Warm Air Furnace Shipments

	1945 Cast Iron	1945 Steel	1944 Cast Iron	1944 Steel
FORCED AIR				
Coal	4,250	18,350	3,819	4,288
Gas	9,260	29,150	3,551	4,647
Oil	935	15,755	180	3,706
Total	14,445	63,255	7,550	12,641
GRAVITY				
Coal	117,650	146,960	125,993	68,954
Gas	2,740	16,850	2,281	4,378
Oil	1,144	2,953	2,604	1,151
Total	121,534	166,763	130,878	74,483

In addition to the factory-assembled warm air units installed last year, dealers assembled 3,898 more units with separate furnaces and conversion burners. Of these, 1,690 or 43.4% were cast iron units and 1,608 were steel. Forced air units that dealers assembled totalled 1,558, or 40% of the dealer total, and 2,340 were gravity units. The table shows a breakdown of warm air units installed in 1945.

Factory Assembled Cast Iron	Factory Assembled Steel		Dealer Assembled Cast Iron	Dealer Assembled Steel
355	14,778	Forced	580	978
34	1,723	Gravity	1,110	1,230

Table 9 shows a break-down of the 365,997 warm air furnaces sold in 1945 by types, material of construction and type of fuel used. Figures for 1944 are given for comparison. Besides the oil-fired units, dealers also sold 20,312 warm air furnaces which were fired with other fuels. Of these 2,940 were gasfired furnaces.

Commercial Oilheating

Installation of commercial heating burners last year totalled 30,515, of which 10,965 were for Nos. 5 and 6 oils and 19,550 were for light oils. There were 30,900 heavy oil burners shipped during 1945, but little more than a third of these were used for commercial heating.

Table 11. Commercial Oilburners

Sales		No. Operating (End of year)
14,990	1935	176,240
18,435	1936	192,830
19,380	1937	210,275
13,955	1938	222,880
16,445	1939	237,680
20,710	1940	256,320
34,750	1941	287,595
55,360	1942	293,120
44,470	1943	285,045
30,705	1944	320,680
30,515	1945	345,090

Of the heavy oil equipment shipped, 15,500 or nearly half were low pressure burners, 10,500 were high pressure, and 4,900 were rotary. Only 7,100 were fully automatic and 2,800 were semi-automatic. There were 21,000 manually operated burners shipped.

Table 10. Domestic Stokers

Sales	% change		No. in use	% change
11,361	...	1931	20,811	...
11,144	— 1.9	1932	31,955	+53.5
15,618	+32.0	1933	47,573	+48.8
25,510	+73.3	1934	73,083	+53.6
45,194	+77.1	1935	118,277	+61.8
84,421	+86.8	1936	202,698	+71.3
103,378	+22.4	1937	306,076	+51.0
98,907	— 4.3	1938	403,005	+31.6
106,208	+ 7.4	1939	507,412	+25.9
159,533	+48.6	1940	658,970	+29.7
198,243	+24.3	1941	843,313	+28.0
96,420	—51.3	1942	938,315	+11.3
19,040	—80.2	1943	955,450	+ 1.8
32,245	+69.3	1944	984,740	+30.5
119,520	+270.7	1945	1,082,700	+ 9.9

Commercial heating replacements required 6,105 burners. Dealers report difficulty in getting commercial heating equipment, and say that the replacement market is much greater than the replacement figures indicate.

There were 345,090 commercial heating installations operating at the end of the year, an increase of 7.6% for 1945 over 1944. Annual sales of commercial heating burners and the number operating at the end of the last eleven years are shown in Table 11.

Competitive Equipment

Domestic gasburner sales for central heating are estimated at 56,818, up sharply from the 20,510 sold in 1944. Conversion burners represented about 25% of total central heating gas sales with 14,183 burners. This compares with 3,180 conversion burners in the year before, or 15.5%. Boiler units at 14,959 represent another 25% of the volume and warm air units with 27,676 installations are about 50% of the volume of gas equipment.

There were 1,160,150 central heating gas installations in the country at the end of 1945, up 4.3% for the year. Table 12 shows domestic gasburner sales for cen-

(Continued on page 59)

Table 12. Domestic Gasburners

Annual Sales

Conversion	Boiler Units	Furnace Units	Total		No. in Use (End of Year)
21,687	10,201	56,666	86,554	1940	1,024,400
36,335	15,007	85,043	136,375	1941	1,075,425
6,087	10,966	29,412	46,465	1942	1,098,000
800	3,485	8,970	13,255	1943	1,101,300
3,180	5,217	12,113	20,510	1944	1,111,855
14,183	14,959	27,676	56,818	1945	1,160,150

Reconversion Headaches

Dealers Have Plenty of Them, But Bright Outlook Eases The Pain

AFTER FOUR YEARS of marking time, wrestling with wartime regulations and financially hanging on by their eye teeth, oilburner dealers this fall came into the postwar period head on, with a brand new crop of troubles. Hungry for orders and better bank accounts, they got the first in unexpected abundance, but the better bank account must wait. Nearly every reconversion difficulty encountered by any industry troubled oilheating men, and in some ways burner men were worse off than the average, particularly those not in the fueloil business.

When the typical retail store is out of some items, it still has many others. But when a burner dealer hasn't burners he's out of everything but expenses.

There has been mighty little complaining, considering the weight of reconversion troubles, obviously because anyone can stay reasonably cheerful when the horizon is so bright. Never has it been as bright for oilheating men, for there is an unsatisfied demand for about a half million burners before difficult selling days return.

While 1946 should be about the most profitable year in the average burner dealer's history, it yet contains some elements of hazard, mostly psychological. When five hundred dollar orders can be closed by telephone, a dealer would be less than human if he didn't to some extent relax in his promotional thinking and activity. Therein lies the danger to longer range prosperity.

In the 20-city consumer survey of fuel preferences conducted last sumer by reporters for FUELOIL & OIL HEAT a large number of coal users said they would prefer to burn oil. But more than half of those people expected to buy a burner when the war ended, or as soon as they could get one; the others were uncertain about when they would go to oil.

Assuming that the coverage of the survey was fairly typical of oilheating markets, about a half million householders wanted a burner at once. That flush demand can probably be satisfied by early 1947 . . . beyond that the industry will have to return to serious marketing. Wise dealer management would look on 1946 as an easy profitable year while devoting most of its mental energies to getting everything well organized for a resumption of hard—and successful—selling in 1947. It is the preparation year for our real postwar job. Without financial worries the planning can be thorough, effective.

With all of the dealers' difficulties in getting burners, after the war ended, there still was an important number installed during the fall, and the year's total number of domestic installations, 145,596, is at least 50% higher than it would have been if government restrictions had continued until the end of the year, and is higher than the number sold in any year prior to 1935.

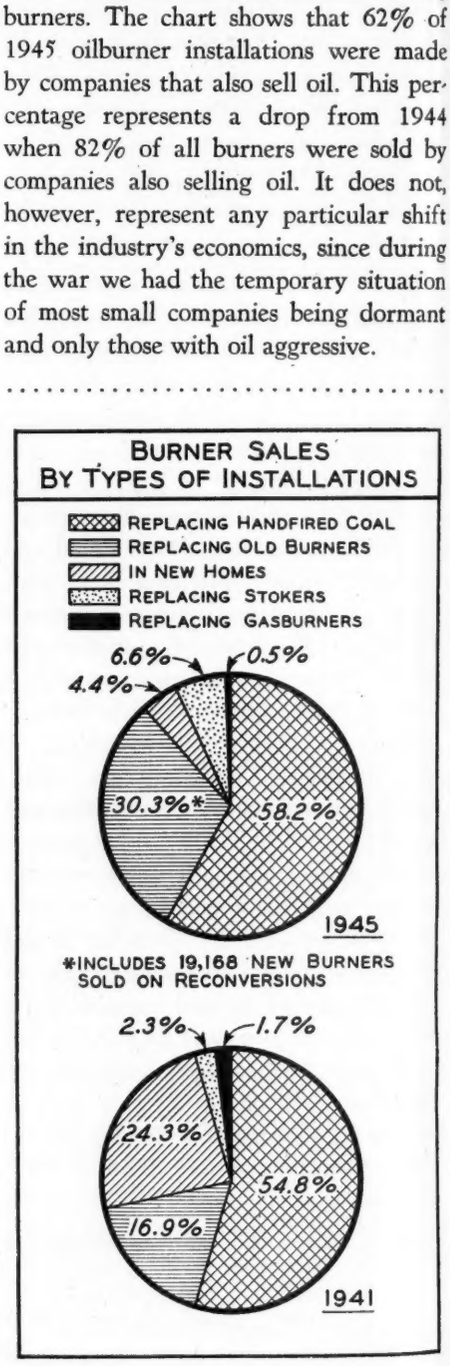
More than half of 1945 installations replaced handfired coal, with most of the balance going to replace old oilburners, including some 19,000 reconversion jobs where new equipment took the place of the antiquated burner stored in the corner of the basement. New homes accounted for only one in twenty-five of the year's installations, while one in sixteen replaced a stoker after its owner discovered that he had been doing just about as much work as he did with handfiring.

There was no important shift in 1945 in the number of combination outlets, dealers selling both burners and oil. The integration is about two-thirds in industry significance with 58% of all dealers who sold burners also selling oil and 76% of the companies that sold oil also selling burners. The chart shows that 62% of 1945 oilburner installations were made by companies that also sell oil. This percentage represents a drop from 1944 when 82% of all burners were sold by companies also selling oil. It does not, however, represent any particular shift in the industry's economics, since during the war we had the temporary situation of most small companies being dormant and only those with oil aggressive.

Burner Sales by Months

	1945	Prewar Average
January	1.9%	4.3%
February	2.0	3.6
March	3.0	5.3
April	3.1	6.5
May	4.1	6.7
June	4.2	7.1
July	3.9	8.7
August	7.7	11.5
September	18.5	17.2
October	19.9	16.2
November	18.2	8.0
December	13.5	4.9

BURNER SALES BY TYPES OF INSTALLATIONS



1945 Burner-Oil Tie-Up by Regions

	New Eng.	Mid-Atl.	Mid-west	Pac. N.W.	All Sec.
Of all dealers selling burners, these sold oil	66%	68%	43%	36%	58%
Of all dealers selling oil, these sold burners	83%	89%	76%	31%	76%

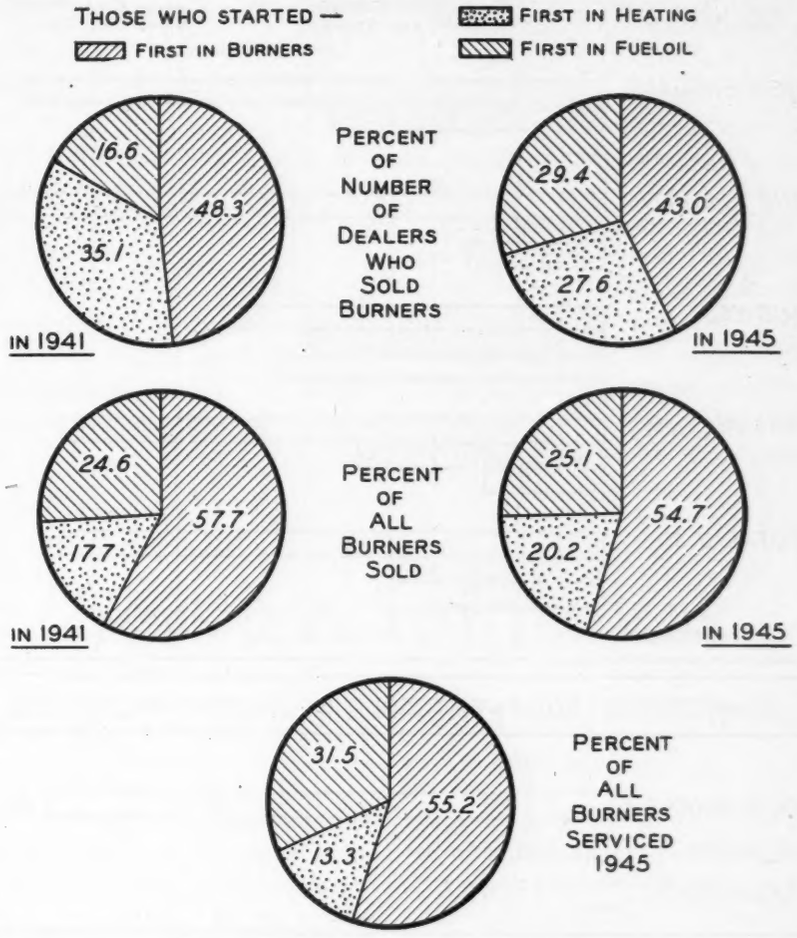
Numerous small dealers and new dealers have become active in recent months so the present ratio of burner and oil tie-up is probably the stable industry pattern. It is interesting to notice in the chart that the degree of integration of burners and oil varies with geography, moving across the country from East to West.

The original oilburner dealer continues to dominate burner sales volume, having made 54.7% of all 1945 installations. The original heating contractor had 20.2% of this business and the original oil company 25.1%. Naturally, many of these original burner dealers are now also oil dealers and vice versa, but the separation by origin shown on the chart is significant in that it measures the relative vigor of companies based on their starting point.

Nearly two-thirds of oilburner dealers in 1945 continued to sell oilheating exclusively, while one-fourth also sold stokers and one-fifth also sold gas equipment, with some companies selling all three. This practice was most prevalent in the Midwest, where only 5% of the reporting dealers sold exclusively oilheating. In that area cheap coal and relatively cheap natural gas bring to both stokers and gasburners stronger public acceptance than in other parts of the country, and unless the Midwest dealer

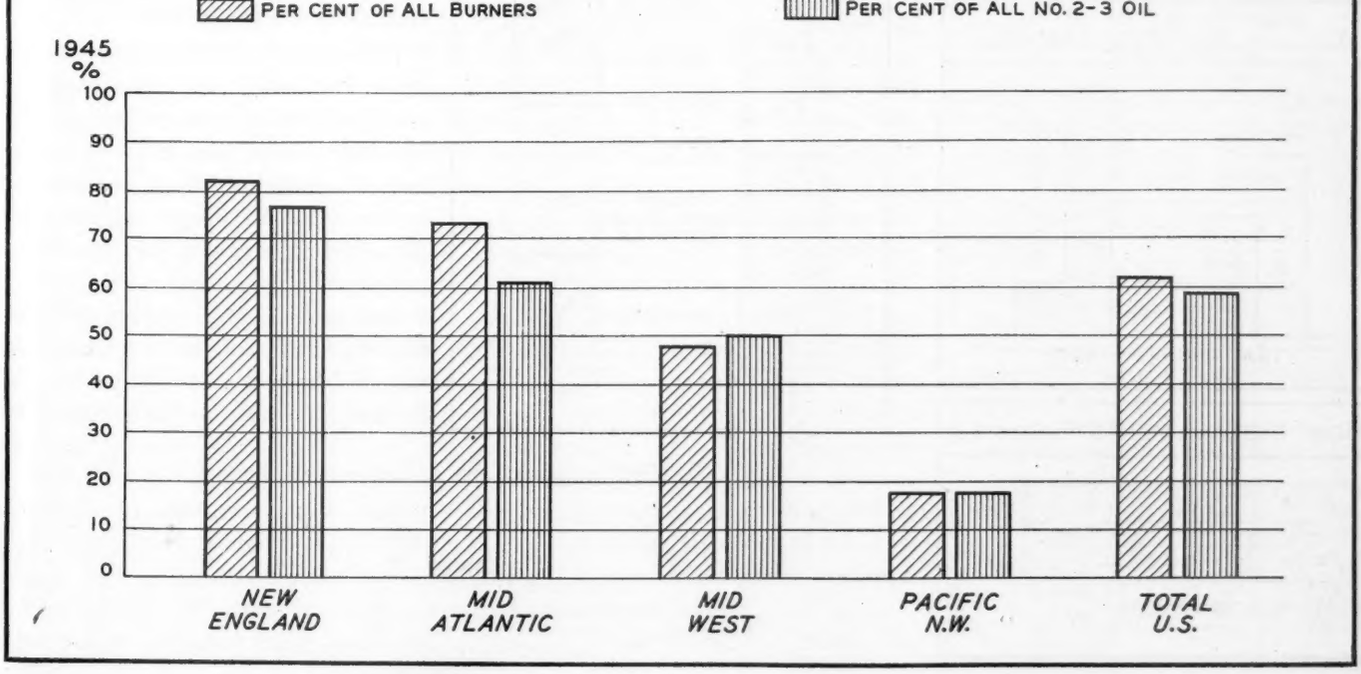
COMPARISON OF OILHEATING DEALERS

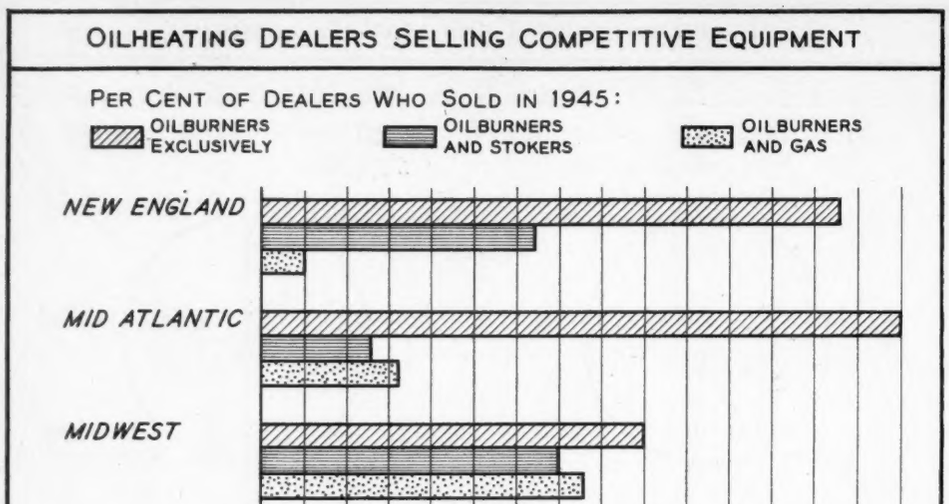
BY BUSINESS ORIGIN OF DEALER

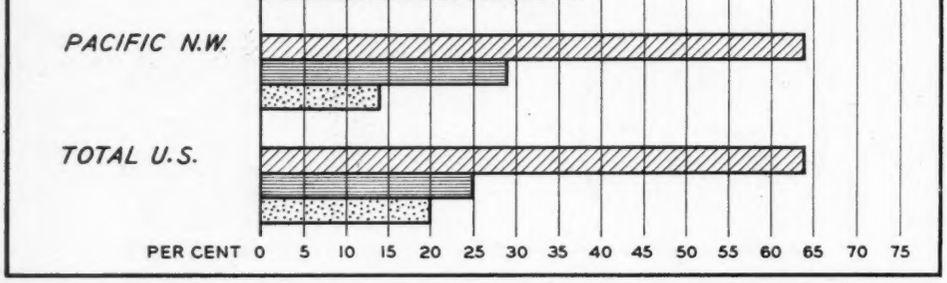


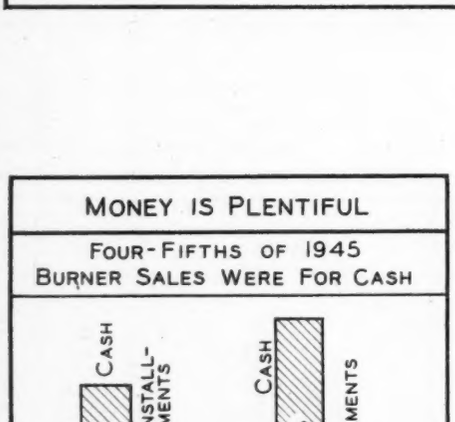
BURNER AND OIL TIE-UP IS SPREADING ACROSS THE COUNTRY

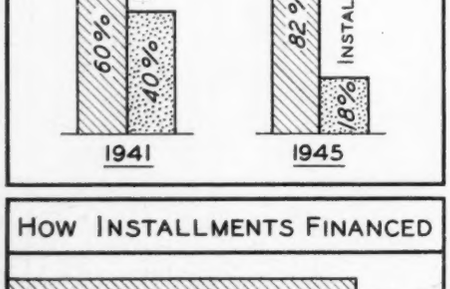
COMPANIES SELLING BOTH BURNERS AND FUELOIL HAD MAJOR SHARE OF TOTAL BURNER AND OIL SALES

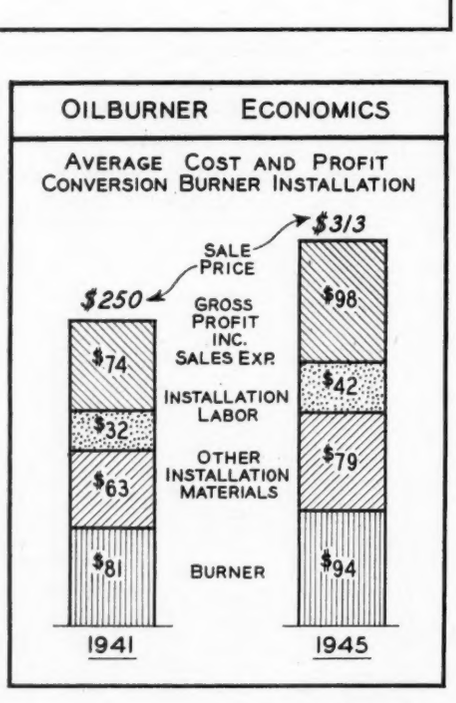



OILHEATING DEALERS SELLING COMPETITIVE EQUIPMENT
PER CENT OF DEALERS WHO SOLD IN 1945:
OILBURNERS EXCLUSIVELY
OILBURNERS AND STOKERS
OILBURNERS AND GAS
NEW ENGLAND
MID ATLANTIC
MIDWEST
PACIFIC N.W.
TOTAL U.S.
PER CENT 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75









also sells oil, he has a pretty difficult time selling oilburners exclusively.

Dealers who sell more than one line of automatic heating equipment rarely do an equal job with each line. Among all reporting dealers, who sold competitive equipment in addition to oilburners, burner installations averaged 38, stokers 13, and gas burners 26.

Burner dealers in 1945 had almost the same percent of gross profit in sales as they had in 1941. The accompanying chart and table show installed costs by conversion burners against average selling price and compared with 1941. After all direct costs such as burner, installation materials, and labor, the dealer had gross profit including sales expense of $98 in an average sale of $313, or a gross margin over bare costs of 31%. This compares with 30% gross margin on the same basis in 1941. The only real advantage at present in dealer economics is the fact that most of 1945 orders involve no sales expense, for only 53% of dealers had salesmen at the close of the year, and 34% had them all year.

Gross margin above primary costs at 31% is too low for a satisfactory profit operation, unless the dealer sells oil or has a particularly profitable service department. Few businesses of any kind can get along on that small a gross margin. Unfortunately, with markups frozen at prewar percentages, they are based on a period of little profit in oilburner retailing. The average dealer will be able to get along through 1946 with this margin, for volume will be abnormally high and sales cost lower than prewar.

Dealers who had salesmen in 1945 preferred the salary and commission basis of paying. Of all burners sold by salesmen, 44% were compensated on salary and commission, 35% on straight commission, and 21% on straight salary. Among dealers paying salesmen straight commission, 66% paid 10%, 17% of dealers paid 12½%, another 10% used the 15% rate, and the remainder were scattered at odd rates from 8 to 20%. Dealers who used a combination salary

1945 Installed Cost of Conversion Burner

	New Eng.	*Mid-Atl.*	*Mid-west*	*Pac. N.W.*	*All Sec.*
Paid for Burner	$96	$96	$91	$88	$94
Installation Materials	77	81	74	91	79
Labor, including subcontract	40	42	47	33	42
Gross profit, including sales expense	78	110	93	106	98
Average sale price	291	329	305	321	313

Dealer Advertising Expenditures in 1945

	Per Dealer	*Per Burner Sold*	*Per Service Customer*	*Per Oil Customer*
Newspapers	$151	$4.14	$0.21	$0.23
Direct Mail	101	2.77	.14	.15
Billboards	5	.15	.01	.01
Telephone Directory	152	4.17	.21	.23
Total	$409	$11.23	$0.57	$0.62
Typical dealer, number of customers		36	716	660

and commission basis paid as commission, over salaries, varying amounts from 2 to 7% with the most popular rate 5%.

Little trouble was encountered in financing oilburner sales since 80% of all 1945 installations were either for cash or on open account, and only 20% involved installment paper. This situation will probably continue through 1946. In handling installment paper it is interesting to notice that 64% of it went to banks and only 24% to finance companies, and the remaining 12% held by the dealers in their strongboxes. It is relatilvely few years ago when banks had little use for installment paper, and the finance companies with high discount rates carried most of them. Today the banker with his vaults bulging and commercial paper going at 2 to 4%, is asking the burner dealer to sell him his term-payment paper. By discounting installment notes at 5 or 6%, the bank nets nearly twice that amount on a simple interest basis so he can afford occasional losses.

Of all oilburners sold and installed in 1945, 64% brought to the dealer the customer's fueloil business. The Mid-Atlantic region was high on this with 85% of installations bringing an oil customer. The lowest ratio was the Pacific Northwest where only 13% of installation carried an oil contract. In New England the percentage was 59 and in the Midwest 57.

Dealer advertising expenditures are shown in an accompanying table. In former years, these have been calculated at dollars per burner sold or cents per service customer. However, since the large majority of dealers today sell burners, service and oil, and since they may be advertising any one of the three, the table shows their advertising expenditure applied to all three activities. The amount shown as spent per burner sold is not to be added to what they spent per service customer and per oil customer. Rather, the total outlay is related to each of the three so that an individual dealer can determine in which direction he may vary from industry practice. For example, the typical dealer in this survey spent $409 for advertising in 1945; he had 36 oilburner sales, 716 service customers, and 660 oil customers.

The classified telephone directory got the largest share of the dealers' appropriation in 1945, slightly more than newspapers. By comparison, in 1944 he spent per service customer 25 cents in newspapers, 17 cents for direct mail, 10 cents for billboards and 18 cents in the classified directory.

Two out of five reporting dealers have made arrangements to handle in 1946 products that they did not sell before the war. Leading the list, 7% of all dealers will sell general home appliances. Second and third respectively with nearly as high a percentage are refrigeration and gas heating equipment. Next, with 4%, is summer cooling equipment. Ten other products are mentioned with relative importance in the following order: domestic oilburners (by oil companies not now selling), home freezer units, vaporizing burners, insulation, industrial oilburners, storm sash, stokers, heat exchangers, automobiles, radios, fueloil, water systems.

Service Improves

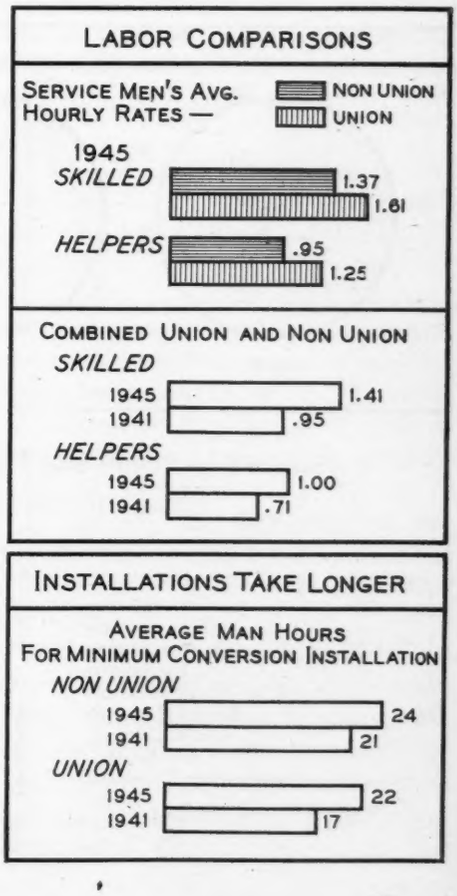
Manpower is Again Relatively Plentiful

THE MOST SIGNIFICANT revelation from service departments in this annual survey is the fact that there is no longer a serious scarcity of manpower. By the close of 1945 dealers had an average of one service man to each 258 service customers on the books, nearly as favorable a situation as in 1941, when there was one man to each 244 customers. At the worst period of scarcity, 1943, some 461 customers had to be served by each man.

The best and worst years are not actually comparable, for in 1941 and again in the fall of 1945 service men spent considerable time making installations, very little in war years. But the improvement was well under way before the war ended and new installations released, for last spring the number of customers per service man had dropped to 378.

With all of the manpower improvement there is no indication that skilled men are looking for jobs, for the industry has never had enough good ones, probably never will. This situation can be expected to get better than it was prewar, for now these men are being paid on the level of comparable skills in other industries, which they previously were not, due to scant prewar profits.

Average hourly wage rates at the close of 1945 are up 45.2%, considerably more than the Bureau of Labor's living cost index which is up 33% in the same period. The chart shows comparisons with 1941.

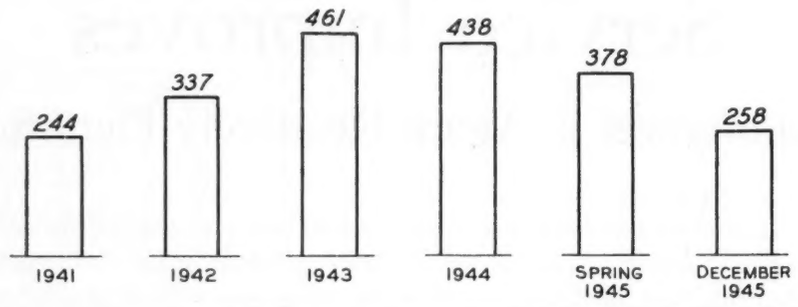


Service Analysis by Regions

	New Eng.	Mid-Atl.	Midwest	Pac. NW.	1945 U. S. Avg.	1941 U. S. Avg.
Service Inc. per Dealer	$7,968	$17,277	$9,258	$8,680	$12,150	....
Service Cust. per Dealer reporting dollar income	656	1164	1151	1007	1043	....
Avg. Income per Customer	$12.14	$14.83	$8.05	$5.50	$11.33	$8.45
Minimum Call Charge	$2.82	$2.86	$2.72	$2.52	$2.78	$2.25
Annual Contracts, per cent of Customers	10	16	2	neg.	10	18
Average Contract Price	$10.55	$15.17	$14.86	....	$14.04	$16.00
Per cent Vacuum Cleaned, other than Ann. Contracts	37	26	18	31	26	39
Avg. Vacuum Cln. Charge	$6.56	$7.89	$6.78	$5.74	$7.08	$4.78
Customers per Service Man, December	287	214	262	368	258	244
Per cent of Service Free	11	5	5	2	6	20
Service Men's Weekly Inc.	$56	$61	$58	$61	$59	$42
Customers per Serv. Truck	370	469	678	526	518	....
Man-Hours required to Install Av. Conv. Burner	27	24	23	20	24	21
Per cent Union Serv. Men	11	7	25	70	16	13

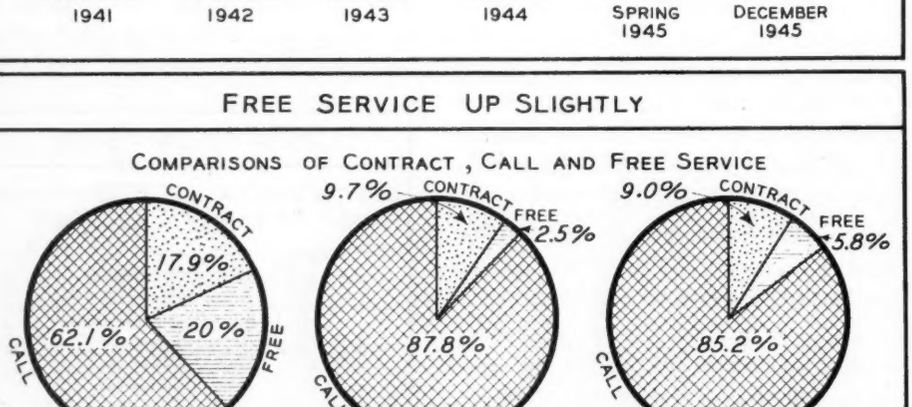
SERVICE MANPOWER BACK TO NORMAL

NUMBER OF SERVICE CUSTOMERS PER SERVICE MAN



FREE SERVICE UP SLIGHTLY

COMPARISONS OF CONTRACT, CALL AND FREE SERVICE



Service Departments Sold These Repair Parts and Accessories

FOR EACH 1,000 SERVICE CUSTOMERS

	New Eng.	Mid-Atl.	Mid-west	Pac. N. W.	All Sec.	1945 Indicated Total
Motors	15	23	19	6	19	45,000
Transformers	12	22	11	10	16	24,000
Burner Pumps	35	37	28	11	31	74,400
Circulators	2	4	5	neg.	4	9,600
Low Water Controls	9	8	5	1	7	16,800
Burner Controls	17	26	22	14	22	52,800
Draft Controls	21	17	19	19	19	45,600
Nozzles	82	79	78	81	80	192,000
Combustion Chambers	12	24	19	16	19	45,600
Baffles	5	4	8	neg.	5	12,000
Oil Filters	63	55	59	24	55	132,000
Oil Tanks	11	6	6	2	7	16,800

Only one-sixth of service shops are union, a slight rise from 13% in 1941. In the table showing wage rates by areas, union rates average higher in all of the classifications with one exception. In the highest wage bracket for skilled servicemen, the country-wide average is higher for non-union men. Unions have a leveling tendency, getting less than non-union for very top men and considerably more to the lower brackets.

Oilburner installations by types of heating plants as shown in the table continue to follow the pattern of favoring boiler heat over warm air, with approximately two-thirds of all 1945 installations made in boilers. This will probably change somewhat as new homes are built in volume, for new homes countrywide always carry a larger ratio of warm air equipment.

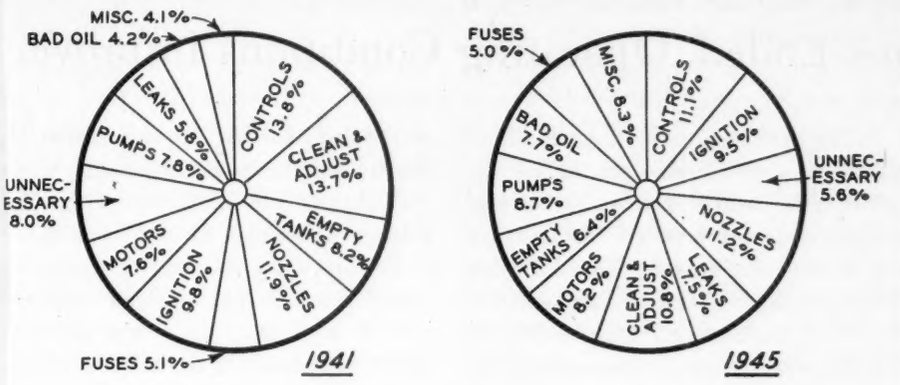
Average dollar income per service customer at $11.33 was slightly higher than the $11.01 average in 1944 and 34% higher than the $8.45 average in 1941. Total 1945 service income of all dealers was thus about 27 million dollars. As in previous years the Midwest and Far West averaged considerably lower income per customer than the East, showing less emphasis on accessory sales and few annual contracts. The average minimum charge per service call, $2.78, was exactly the same as in 1944, and 24% higher than the $2.25 average in 1941.

Annual service contracts continue to be less popular than before the war, with only 10% of customers having them. Also there were relatively less summer vacuum cleaning jobs than in 1941 and a few less than in 1944. The comparisons being 26% of customers in 1945, 31% in 1944, and 39% in 1941. The average charge for vacuum cleaning, $7.08, was 48% above the average of $4.78 prewar.

Free service is showing a little comeback, representing 6% of all service, excluding first-year service on new burners. This compares with 3% free service in 1944 and 20% in 1941. The revival of free service has progressed farther in New England than in other areas; one call in nine was free, averaging all companies, and two fairly substantial firms reported 100% free service.

Service trucks in use at the close of 1945 averaged one to each 518 customers, or approximately one to each two service men. This does not mean that

CAUSES OF SERVICE CALLS; PREWAR AND 1945



Service Wage Rates Per Hour

	NON UNION						UNION					
	Skilled			Helpers			Skilled			Helpers		
	High	Low	Avg.	High	Low	Avg.	High	Low	Avg.	High	Low	Avg.
New England	2.00	.80	1.29	1.30	.75	.95	1.50	1.25	1.44	1.50	.90	1.29
Middle Atlantic	2.00	.75	1.42	1.50	.65	.99	2.00	1.25	1.71	1.50	1.00	1.25
Midwest	2.00	.85	1.30	1.50	.50	.88	2.00	1.15	1.62	1.50	.80	1.21
Pacific Northwest	1.83	1.06	1.53	1.00	.96	.99	1.94	1.30	1.49	1.65	.95	1.30
U. S. Average	1.98	.82	1.37	1.41	.66	.95	1.89	1.23	1.61	1.52	.92	1.25

Type of Heating Plants That Got Oilburners, 1945

	New Eng.	Mid-Atl.	Mid-West	Pac. N. W.	All Sec.
Steam	53%	47%	13%	14%	35%
Hot Water	31	41	30	8	32
Gravity Air	13	7	41	38	22
Forced Air	3	5	16	40	11

two men always ride on a truck, but rather that a number of them use passenger cars on service calls.

Sheet metal work on warm air installations is handled by 21% of reporting dealers in their own shops. Another 26% uses prefabricated ductwork and the remaining 53% farms out or sub-contracts all ductwork. The only area with important departure from this pattern is the Midwest where 37% of oilburner dealers have their own sheet metal shops. The clear reason is that in that section 57% of oilfired installations are warm air.

In the chart showing causes of service calls in 1945 the principal changes over 1941 are seen to be in controls, unnecessary calls, leaks, clean and adjust, and difficulties due to unsatisfactory oil. There was little change in the weight of the other service causes.

Service departments have been pretty much in the saddle during the war years when there was little sales activity. And now that the war had ended they should be able to hold some of the increased stature. It has been frequently demonstrated that public acceptance of oilheating in a community, and the number of new people wanting to use oilheating, is closely geared to the degree of satisfaction among present oilheating users. The service department has a strong influence on toward keeping users happy, and in this role is important to the sales department.

◈

Sweatt Sees 300,000 New Homes in 1946

LESS THAN HALF the estimated number of new homes to be built in the first postwar year will be constructed in 1946, Harold Sweatt, president of Minneapolis-Honeywell forecasts. Wartime estimates of 600,000 to 1,000,000 homes a year will not be reached this year, he believes.

"We are getting off to a much slower start than previously anticipated," Mr. Sweatt said, "but consensus in the industry seems to agree that over the next decade we will reach the expected total of 6,000,000 to 7,000,000 new homes, although these will not be built at the average of 600,000 to 700,000 dwellings a year. With 300,000 new houses built in 1946, the rate will probably increase to a little more than 500,000 in 1947 and after that, providing no unforeseen developments occur in the interim, the housing industry probably will be well able to supply their current building schedules."

Referring specifically to heating, Mr. Sweatt said that surveys conducted by his company indicate that approximately 30% of all new homes will be equipped with automatic heating. Only about 10% of all existing homes are automatically heated, he continued, although this figure will be greatly increased in coming years as more and more people modernize their heating systems.

"Although housing is getting off to a slow start," Mr. Sweatt said, "there is little reason for pessimism over the long term, in view of the fact that the nation is now facing the greatest demand for new homes in its history. The industry, as a whole, is in the midst of an expansion program to enable it to take care of the need for new dwellings and, in addition, is well on the way to supplying materials needed for the vast amount of conversion for existing homes on which practically no maintenance was possible during the war."

◈

P.I.W.C. Liquidated

PETROLEUM ADMINISTRATOR for War Harold L. Ickes December 26 announced the liquidation of the Petroleum Industry War Council and the Foreign Operations Committee, including their committees and subcommittees, which have operated under the direction of the Petroleum Administration for War during the war period.

The liquidation was effected by rescinding Recommendation 24, which outlines the duties, functions, and procedures of the PIWC, and Directive 70, under which the supply and transportation of the combined petroleum resources of the United Nations in the foreign field were administered and which authorized establishment of the Foreign Operations Committee as an advisory body, the Administrator explained.

In ordering the dissolution of the PIWC, Administrator Ickes expressed his appreciation of the Council's services to the nation.

He cited the activities of the PIWC as a unique example of cooperation by industry with government to achieve one of the outstanding victories of the war—assurance of petroleum for every military and essential civilian need of the United Nations.

Fueloil Distribution 1945

With War Restrictions Ended, Operating Conditions Improve

THE YEAR 1945 for fueloil distributors was a transition year, neither fish, fowl or good red herring, for accurate comparisons with former years. With rationing and other government restrictions in effect during the year's peak volume months and with relative freedom of operation in the fall, gallonage sold per dealer and per customer continue to reflect the war period. Other operating characteristics such as number of customers served by automatic deliveries, showed marked improvement at the end of the year when this study was made.

The general table (Fueloil Distribution Yardsticks) tells most of the story of what happened in 1945. To get the information shown in the table several hundred fueloil distributors from Maine to the Pacific Northwest submitted full detail, in confidence, of their operating figures for the year. In studying the table, it is important to know that every factor shown does not apply to every reporting dealer, so that it is not possible to take one set of numbers and multiply or divide it by another group to arrive at answers shown in a third section. Each line of figures stands on its own and includes all dealers who engaged in that particular activity and reported it. It is also important to understand that no major oil companies were included in the survey since their operations are so complex that it is difficult for them to arrive at comparable measurements.

Bulk Plant Operators

Only about two out of five fueloil distributors in the country operate their own bulk plants. The others load at some large terminal, usually operated by a major oil company. The Midwest has the largest ratio of bulk plant operators, where nearly one in two have their own plants. It is significant, however, that the percent of total oil sales made by companies with bulk plants is considerably larger in each geographic area than the percent of companies who have bulk plants, with 60% of total distillate heating oil being sold at retail by bulk plant operators.

In the next section of the table, showing average 1945 sales per fueloil distributor, the ratio of distillate to kerosene is quite different between the East and the West. There are two reasons for this. The lion's share of kerosene demand is in the New England and Middle Atlantic regions, and because of this concentrated market thousands of one and two truck peddlers have taken over much of its distribution. These peddlers were not included in the survey, so the kerosene gallonage shown in these sections is that part of the business done by the average fueloil distributor.

More Kero in Furnaces

In the Midwest and Pacific Northwest, No. 1 oil, which in the table is grouped with kerosene, serves a lot of central heating plants, particularly vaporizing burners, and this product is, of course, sold by the fueloil distributors. In fact, an increasing share of the eastern distributors' No. 1 and kerosene business is for central heating plants as demonstrated by the fact that the average 1945 sale per customer on this product is upwards of 900 gallons. It is well known that the average range burner or space heater uses only six to seven hundred gallons, and that was the average prewar figure for gallons per customer in the East.

While all of the dealers in this study sold distillate fuel, 59% sold kerosene or No. 1 and 25% sold residual fuel. The Midwest had by far the largest ratio of dealers handling kerosene and in the Pacific Northwest half of all reporting dealers sold residual.

The average distillate consumer in 1945 bought 1,720 gallons. These consumers are not all residential, for the figures include small commercial jobs, burning distillate and using, in effect, a domestic oilburner. The average consumption of 1,720 gallons compares with 1,673 in 1944 and about 2,200 before the war. Notice that there was very little increase over last year, principally because rationing still dominated the peak heating season in 1945. Average gallons consumed will probably never go back to the prewar figure, for the obvious reason that much was done to improve houses to save fuel during the war, and people have learned to be more careful in its use.

Countrywide, the average fueloil distributor served 241 distillate customers per truck. This is not a very impressive figure since many of the larger companies run upwards of 400 customers per truck. It is, however, a reasonably accurate figure since all calculations in the table are weighted for size and are not simply numerical averages. In the Pacific Northwest where the average dealer is somewhat larger than in the other sections of the country and where oilheating is tightly concentrated in city areas the average truck served 401 distillate customers.

Large operators also got more mileage per truck during the year than the average of all companies. Those selling over a million gallons average 15,499 miles per truck against the overall average of 13,086. Interestingly, the wartime truck scarcity with the consequent number of trucks falling by the wayside has pushed up the average mileage considerably in the last two years. In 1944 it was 11,618 and in 1943, 9,634.

More Gallons per Drop

One significant measure of effective management is the number of gallons per average drop. For the total country last year this was 229, with the best showing in the Pacific Northwest, and the weakest in New England. There is another factor, however, that modifies this. New England probably has the smallest average tank size. The Midwest has an important percentage of outside buried tanks, 550 gallons and larger. In the Pacific Northwest, city ordinances often limit indoor tanks to 100 gallons, so the majority of recent installations had 625 gallon buried tanks. The war years have brought a lot of improvement in gallons-per-drop, for in 1941 the average was 184 gallons.

Another important measurement of dealer efficiency is the number of gallons delivered during the year for each mile of truck operation. In 1945, 30 gallons were

delivered for each truck mile. This compares with 27 gallons in 1944 which was the low point in recent years, and 31 gallons in 1943.

Automatic delivery operation at the close of 1945 was serving 62% of distillate customers, a marked jump from 51% in the same month of the previous year. Many fueloil distributors had found it too difficult to operate Degree-Day systems under rationing since the customers' allowable gallonage was not related to daily temperatures.

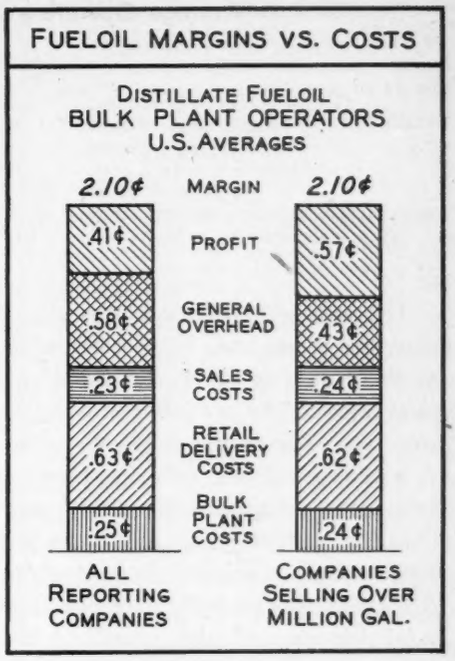
In the returns this year not all heating oil was sold by companies operating bulk plants or trucks, although naturally they delivered all of it. Oilburner dealers who have made commission arrangements with large fueloil companies sold at retail 15% of the total gallonage. The practice was quite prevalent in all sections except the Pacific Northwest where it was negligible. These commission dealers sold on the average just about half as much as the direct selling fueloil distributor, since 26% of all distillate retail outlets were commission dealers, with these selling 15% of the gallonage. The most frequently used commission rate was one-half cent with 72% of commission arrangements on that basis. Another 12% of commission dealers had a rate of one-quarter cent and the remaining 16% had rates varying from one-tenth cent to one cent. It is difficult to see how a one cent commission could be paid unless it is for the first year only on new contracts secured with burner installations. In other words, the distributor would be paying around $20 to get a new account on the books, a conservative figure.

The average oilburner dealer selling oil on commission realized $1,649 for the year. Some were as low as $50, and as high as $15,000.

For the first time in several years fueloil distributors were asked in this study for operating costs related to margins. An accompanying chart and table show the highlights from the returns.

The individual sectional breakdowns have variations that are not completely understandable, unless, in some instances, they are compared with figures in the large chart. For example, the variation in bulk plant operating costs has considerable relation to the annual turnover of bulk plant capacity. Middle Atlantic distributors with the highest average bulk plant cost have the lowest annual turnover, only 3.3 times. The Pacific Northwest with the lowest bulk plant cost per gallon turns over its storage capacity forty-one times per year, which means that in winter their storage must be completely filled every four or five days.

Just why truck-delivery costs in the Midwest should be substantially lower than in other sections is not clear, but that area does run to larger than average gallons per drop and considerably larger than average gallons per truck mile. The overhead factor, largest in New England and smallest in the West, may be due to the East having larger average executive incomes. Considering the average sales of the reporting companies, a small difference in the bosses' salary would account for the difference in overhead cost.



Fueloil Distribution Yardsticks 1945

	New Eng.	Mid-Atl.	Mid-West	Pac. N.W.	All Sec.
Per cent of dealers having bulk plants	32	35	47	30	38
Per cent of total heating oil that was retailed by bulk plant operators	54	55	78	41	60
Turnover of bulk plant capacity, times	6.9	3.3	4.4	47.0	8.7
Average storage capacity (thous. gal.)					
Distillate	126	491	118	28	260
No. 1, Kerosene	84	112	105	29	96
Residual	..	277	77	..	191
Per cent of dealers selling No. 1, Kerosene	68	39	91	29	59
Per cent selling Residual	7	28	26	50	25
Average sales per dealers (thous. gal.)					
Distillate	630	1,309	554	1,376	953
No. 1, Kerosene	298	200	570	1,212	432
Residual	218	690	795	1,256	684
Average number of customers per dealer					
Distillate, residential	338	817	313	1,295	618
Distillate, commercial-apartment	60	64	39	95	59
No. 1, Kerosene	352	197	1,013	1,083	561
Residual	51	33	38	55	40
Average gallons sold per customer					
Distillate	1,788	1,756	1,785	1,240	1,720
No. 1, Kerosene	914	977	608	1,016	858
Residual	..	20,191	20,990	10,260	19,249
Trucks operated per dealer					
Distillate	2.3	4.2	2.2	3.2	3.1
No. 1, Kerosene	1.2	1.7	2.7	3.3	2.1
Residual	..	3.7	1.6	1.4	2.6
All types	3.2	4.8	4.3	4.7	4.3
Customers per truck					
Distillate	185	265	192	401	241
No. 1, Kerosene	314	271	457	271	335
Residual	..	28	31	44	31
Miles per truck, average all dealers	11,684	16,313	10,483	10,788	13,086
Same, dealers selling over million gal.	10,600	23,098	10,125	11,027	15,499
Yearly gallons per truck (thous.)					
Distillate	331	465	343	497	405
No. 1, Kerosene	287	265	278	275	274
Residual	..	565	650	451	583
Average gallons per drop					
Distillate	188	236	240	246	229
No. 1, Kerosene	56	51	123	71	76
Residual	1,420	1,385	945	1,280	1,250
Gallons per truck-mile, Distillate	29	25	34	36	30
Per cent of dealers using Degree-Days	43	67	67	50	61
Per cent of customers getting D-D Del'y	51	58	75	63	62
Per cent of total distillate sold through commission dealers	14	11	22	..	15
Commission dealers represent this per cent of all retail outlets	17	30	26	..	26
Average annual commission per dealer	$1,917	$1,740	$1,348	..	$1,649

Average Operating Costs Related to Margins

	New Eng.	Mid-Atl.	Mid-West	Pac. N.W.	All Sec.	Dlrs. Over Million Gallons
Cost of operating bulk plant	.20¢	.31¢	.24¢	.13¢	.25¢	.24¢
Retail delivery costs	.82	.63	.47	.68	.63	.62
Selling expenses	.23	.25	.21	.25	.23	.24
General overhead costs	.68	.64	.53	.53	.58	.43
Operating profit	.23	.31	.57	.51	.41	.57
Avg. margin to bulk plant operators	2.16	2.14	2.02	2.10	2.10	2.10
Avg. margin where no bulk plant	2.09	2.01	1.83	1.90	1.96	1.99

The average profit, countrywide, of forty-one points looks large when related to the margin of 2.10¢, but based on a sales price of 7.5¢ per gallon, it is slightly more than 5% on the dollar sale.

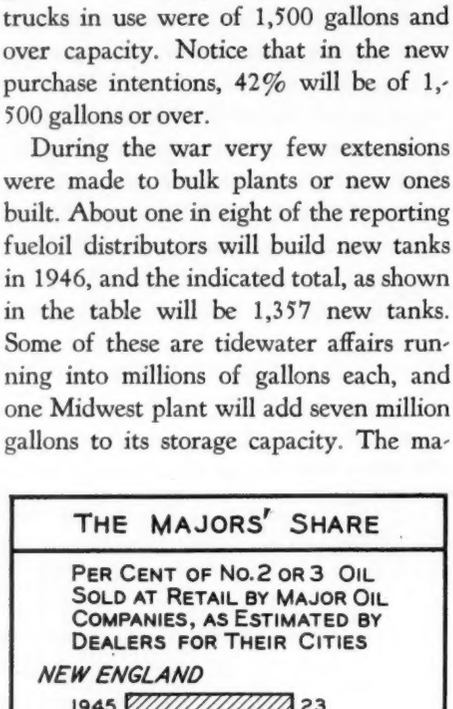
In the last column of the operating cost table, large companies, those with more than one million gallon sales, have been separated and averaged. It is significant that their costs on bulk plant operation, retail delivery, and sales expense are little better than those of all companies regardless of size. Where they make a real gain is in overhead expense, because the bosses' salary and other fixed expenses are spread over wider sales totals. Their average margin countrywide is just the same as the average of all dealers. Margins to fueloil distributors operating trucks but no bulk plants average 1.96¢ or fourteen points less than those with bulk plants.

Lumping together all companies in the study it obviously did not pay to have a bulk plant, for the bulk plant cost is twenty-five points, while the difference between bulk plant and no-bulk-plant margins is 14 points. Some individual large companies do get as much of an extra margin as it costs to run the plant, and apparently many other companies who do not cover their plant costs feel that there are compensating benefits in prestige and local advertising value, as well as in having better control of their own supplies.

Fueloil distributors are going to need a lot of new equipment in 1946 as indicated in the table of requirements. The figures shown are not necessarily the total of things they will buy, but these are the items that they now recognize they must have and will buy when they can get promises of delivery.

The trend toward larger truck sizes evident in the past several years is further accelerated in the disclosure of these purchase intentions. Only 16% of the trucks dealers will buy in 1946 will be of less than 1,000 gallons capacity. Going back six years to 1939, a study of tank truck sizes in use then showed 65% under 1,000 gallons. That study showed that 14% of trucks in use were of 1,500 gallons and over capacity. Notice that in the new purchase intentions, 42% will be of 1,500 gallons or over.

During the war very few extensions were made to bulk plants or new ones built. About one in eight of the reporting fueloil distributors will build new tanks in 1946, and the indicated total, as shown in the table will be 1,357 new tanks. Some of these are tidewater affairs running into millions of gallons each, and one Midwest plant will add seven million gallons to its storage capacity. The majority of tanks to be built, however, are in the ten to fifty thousand gallon range.



New Equipment Purchases Planned for Coming Year

	Number
Fueloil trucks, under 1,000 gallons	736
1,000 to 1,499 gallons	1,863
1,500 gallons and over	1,849
Truck equipment, including new trucks—Meters	6,794
Pumps	6,988
Hose reels	6,313
Fueloil hose, feet	1,171,365
Bulk plant equipment Tanks	1,357
Pumps	667
Meters	828
Fill signals for customers tanks	250,976

For years there has been considerable conjecture over what percent of total distillate heating oil was sold at retail and delivered to users by refiners, principally major oil companies. The consensus has been that majors did less than 20% of retail gallonage. Distributors were asked this year for their estimate of major oil companies' retail share in their individual cities, and the results are shown in an accompanying chart. These dealers believe that majors do now 27% of the total demand as direct business, 2% less than they did in 1941. This is probably a little on the high side, since businessmen frequently over-estimate their large competitors, yet it is interesting to see that they believe that this percentage is less than prewar.

Fueloil distributors in general face a decidedly optimistic future. The number of burners installed since the war ended has already increased the demand noticeably, and as soon as burner factories can operate at full schedule, probably within three or four months, the overall demand for distillate heating oil will rise by some 15 to 20% each year, for the next few years. This expansion will not be automatic and effortless beyond perhaps one year, but it is entirely reasonable to expect, if the industry, fueloil and burner men alike, does an adequate promotional job on the advantages of oilheating.

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Benjamin H. Hillman, president of Great Eastern Fuel Co., large New York fueloil distributors, died January 6.

Lieut. A. C. Nydegger, U. S. N. R. had been relieved of active duty after more than two years in the Navy, and on December 1 returned to the Milwaukee Office of the Blackmer Pump Company at 1127 North Van Buren St. as manager. Mr. Nydegger served as an engineering officer and had attained the grade of lieutenant senior grade.

Robert C. Allen, Jr. has been appointed manager of the Kansas City factory branch of General Controls Co., Glendale, Cal., after nearly four years of Army service with the Air Force. Before the war Allen was manager of the Company's Texas branch at Houston.

Wartime Burner Export Figures Released

BEFORE THE WAR a number of oilburner manufacturers had developed fairly active export markets, mostly in countries that either became involved in the war or were hemmed in by belligerents that prevented shipments getting through to them. There was, however, a little export activity during the war years, primarily to the Western Hemisphere. For security reasons, all civilian export data were kept secret until the war ended. These have now been released by the Bureau of Foreign and Domestic Commerce for the years 1942-3-4. Included in the table are only those burners sold for civilian uses.

Wartime Burner Exports

	DOMESTIC CONVERSION OILBURNERS (Number)			INDUSTRIAL BURNERS (Number)			OILBURNER PARTS—DOMESTIC & INDUSTRIAL (Thousands of dollars)		
	1942	*1943*	*1944*	*1942*	*1943*	*1944*	*1942*	*1943*	*1944*
NORTH AMERICA									
Greenland	1	10	7	16	1	3	1	1	..
Canada	171	89	149	1,094	455	636	80	140	218
Newfoundland & Labrador	37	25	129	12	1	26	5	4	2
Mexico	219	488	310	172	177	490	10	19	28
Bermuda	1	..	1	1	1	..	..	..	..
Total N. A.	429	612	596	1,295	635	1,155	96	164	248
CENTRAL AMERICA									
Nicaragua	..	..	..	1	..	..	..	..	..
Costa Rica	..	..	3	..	2	1	..	..	..
Guatemala	..	..	..	2	..	..	2	..	..
British Honduras	1	..	..	..	..	..	..	..	..
Honduras	..	1	..	..	..	2	..	..	..
Panama (Republic)	1	1	5	4	3	9	1	1	..
Panama Canal Zone	3	2	1	34	..	1	3	1	4
Total C. A.	5	4	9	41	5	13	6	2	4
WEST INDIES									
Haiti	..	..	..	..	..	4	..	..	..
Dom. Republic	..	..	..	..	..	6	..	..	..
Bahamas	1	1	..	1	2	..	..	..	..
Cuba	7	2	..	21	213	43	3	28	5
Jamaica	..	..	..	3	2	1	..	..	..
Windward Islands	..	1	..	..	1	..	..	..	..
Barbados	..	..	..	2	..	1	..	..	..
Trinidad & Tobago	..	..	2	9	..	10	..	7	1
Curacao	9	1	1	73	1	8	4	6	15
Total W. I.	17	5	3	109	219	73	7	41	21
SOUTH AMERICA									
Colombia	..	14	14	17	2	19	..	..	2
Venezuela	13	39	14	66	12	63	2	1	5
British Guiana	2	..	..	..	1	..	..	..	..
Surinam	..	3	1	..	..	..	..	2	..
Ecuador	1	..	93	5	5	3	..	..	..
Peru	4	..	..	21	50	30	..	2	7
Bolivia	1	3	..	30	27	2	1	..	..
Chile	2	1	2	11	3	10	2	1	..
Brazil	36	7	10	44	65	30	6	4	..
Uruguay	51	2	..	17	5	9	1	1	..
Argentina	333	..	..	54	5	..	2	5	..
Total S. A.	443	69	134	265	175	166	14	16	14
EUROPE									
Iceland	..	..	4	2	..	1	..	..	..
United Kingdom	..	4	..	2	3	..	1	9	2
Russia	..	..	..	..	7	2	..	2	17
Portugal	11	..	..	..	..	..	..	..	..
Total Europe	11	4	4	4	10	3	1	11	19
AFRICA									
Egypt	20	..	..	..	2	12	..	..	..
Liberia	..	..	..	..	..	3	1	..	8
Belgian Congo	..	..	..	..	2	1	..	..	..
Union of S. Afr.	1	..	..	..	..	..	4	..	..
French Morocco	..	..	..	..	..	..	..	..	17
Tunisia	..	..	..	..	..	4	..	..	..
Nigeria	..	..	..	..	..	68	..	..	..
Total Africa	21	..	..	..	4	88	5	..	25
ASIA									
Iraq	..	..	..	..	1	7	..	..	..
Iran	..	..	..	1	..	4	..	..	..
Palestine & Trans-Jordan	..	..	..	..	1	..	..	..	..
Arabia Peninsula States	..	..	1	..	..	26	..	1	16
State of Bahrein	..	1	..	1	30	1	..	..	17
India & Dependencies	..	12	..	10	23	..	..	1	..
Total Asia	..	13	1	12	55	38	..	2	33
SOUTH PACIFIC									
Australia	..	..	..	..	..	..	10	..	1
New Zealand	..	..	..	3	..	..	..	..	..
French Oceania	..	..	..	..	..	1	..	..	..
Total Pacific	..	..	..	3	..	1	10	..	1
GRAND TOTAL	926	707	747	1,729	1,103	1,537	139	236	365

Oilheating Starts Back

(*Continued from page 49*)

tral heating in the last six years by classes of equipment, and also the total number of installations operating at the end of each year.

Domestic and small commercial stokers totalled 119,520 installations in 1945, up in a sharp come-back from the 32,245 stoker sales in 1944. Of these, 113,860 were bituminous coal stokers, representing 95.3% of the volume against 91.7% in 1944, and 85.8% in 1943. Anthracite stokers totalled 5,660 for the year, against 2675 in 1944. Total stoker sales by years, and number operating at the end of each year are shown in Table 10.

Oilburner dealers sold 34,740 oilfired space heaters in 1945, against 2,410 in 1944 and 16,300 in 1943. This is believed to represent only a small part of the total space heaters sold during the year, but no final figure is yet available on sales for the year.

Dealers sold 9,480 oilfired water heaters during the year, an increase of more than 86% from 1944 when 5,060 oilfired water heaters passed through dealers' hands. Nearly 30% of the water heater installations were fired with mechanical oil burners. Vaporizing equipment was used in 6,680 units, though it is believed that total sales of vaporizing water heaters was somewhat greater than that.

Summary

The retail value of equipment sold and service rendered by oilburner dealers in 1945 is estimated at $76,400,000, of which about two-thirds is from equipment sales. This total represents an increase of nearly 300% over 1944, but still is far below levels expected to be reached in the following years. With an expected increase in oilburner production, and a flush market for roughly 500,000 oilburners and units, 1946 and 1947 should mark an all-time high in industry prosperity.

The oilheating industry definitely started on the way back to normal business in 1945. Rationing of fueloil was ended August 15, and restrictions on the manufacture and sale of equipment were removed. The only limiting factor in sales during the coming twelve months will be the ability to produce equipment.

Active Canadian Market for Burners Predicted

DATA IN THE TABLES below show the existing Canadian oilburner market, also fueloil demand, based upon number in operation.

During the war an important number of burners were removed because of the fuel scarcity. Before the war there were about 40,000 domestic jobs operating in the Dominion. The table shows that at the end of 1944 the number had fallen to 31,779. Figures for 1945 are not yet procurable.

Canada also had, a year ago, 73,628 space heaters, range burners and other small fuel applications burning kerosene.

In recent months public interest in oilheating has been exceptionally high, and manufacturers expect to sell in 1946 about as many as were in use at the time these tables were compiled. Some expect installations this year to reach 50,000.

In addition to a dozen or more burner factories in Canada, several U. S. manufacturers have assembly plants there, shipping parts from here to save duty.

Underwriters List 148 Oilburner Manufacturers

THE ANNUAL LINE-UP of companies and their products having Underwriters' listings is in the November issue of the bulletin published by Underwriters' Laboratories, Chicago.

The number of manufacturers with listings on conversion oilburners is the same as last year, 148, after eliminating 11 more or less duplications, such as Esso-G. & B., Silent-Glow-Caloroil, etc. This represents a drop of 37 from 1942, when there were 185 conversion burner producers.

Makers of oilfired units, after eliminating duplications, number 49, of which 29 make principally vaporizing equipment and 20 pressure burner units. Last year there were 63 listed unit manufacturers.

There are 27 listed companies making industrial burners, compared with 24 a year ago.

In the listing this year nearly every oilburner and unit manufacturer of pressure burners has Commercial Standards designation on some or all models.

U. S. Department of Labor Fueloil Prices October

FIELD INVESTIGATORS for the Department of Labor monthly check prices of principal fuels in several cities in each section of the country. Getting retail quotations from various suppliers in each market, the prices are averaged and published. Those in the table that follow were taken Oct. 15 (cents per gallon):

Prices of No. 2 and 3 oil have been raised in Eastern cities 2/10¢ since this list was compiled; kerosene prices raised ½¢.

	Range	*No. 1*	*No. 2*	*No. 3*
Boston	9.10	8.96	7.60	7.60
Bridgeport	8.80	...	7.50	7.50
Fall River	...	...	8.30	...
Manchester	9.60	...	8.30	...
New Haven	8.80	...	7.50	...
Portland, Me.	8.70	8.60	7.50	...
Providence	8.80	8.72	7.60	...
Baltimore	...	8.35	7.50	...
Buffalo	9.40	9.40	8.50	8.50
Newark	...	8.75	7.50	7.50
*New York	...	...	7.58	...
Philadelphia	...	8.48	7.43	7.41
Rochester	9.50	9.50	8.20	8.20
Washington	...	8.80	7.90	...
**Chicago	7.62	7.18	7.19	7.18
***Cleveland	...	8.24	...	7.72
**Detroit	...	8.20	7.72	7.18
**Des Moines	...	7.99	7.45	7.45
Milwaukee	8.20	8.20	7.70	7.70
Minneapolis	8.10	8.00	7.80	7.80
Omaha	...	7.80	7.30	7.30
**St. Louis	8.47	7.83	7.45	7.49
St. Paul	8.00	...	7.80	7.80
***New Orleans	...	8.72	7.21	7.21
Norfolk	...	8.50	7.30	...
Richmond	...	8.80	7.50	...
**Denver	...	8.67	7.14	...
Portland, Ore.	...	7.06	6.05	...
***Seattle	...	7.47	6.44	...

*Price includes 1% sales tax.
**Price includes 2% sales tax.
***Price includes 3% sales tax.

Total Installations and Deliveries for Domestic Heating by Principal Cities

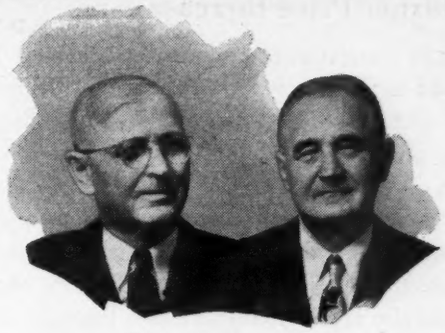
Principal Cities	Number, furnaces and boilers		Number, stoves, ranges and small burners		Imp. Gallons furnace and boiler fuel	
	1944	1943	1944	1943	1944	1943
Charlottetown and Saint John	604	556	3,340	3,333	1,400,042	1,343,484
Halifax	884	1,068	6,740	9,343	2,003,630	2,100,063
Montreal	6,081	6,086	28,733	23,261	15,258,941	13,560,711
Quebec	703	695	3,058	2,732	1,343,012	1,267,454
Sherbrooke	328	323	863	737	606,874	565,583
Trois Rivieres	161	147	575	470	385,271	285,668
Hamilton	691	524	105	105	1,525,500	955,165
London	807	774	111	111	1,298,650	1,299,947
Ottawa	2,036	1,880	248	245	3,472,095	3,643,196
Toronto	7,916	7,178	641	618	16,121,673	15,024,661
Windsor	103	101	32	33	156,100	158,725
Winnipeg	497	530	4	35	766,631	983,753
Regina and Saskatoo	195	296	k 1,372	71	910,131	555,162
Vancouver and New Westminster	2,305	2,546	7,199	6,787	7,141,353	6,285,524
Victoria	730	717	2,666	2,357	926,574	954,201
Above cities	24,041	23,394	55,687	50,238	53,316,477	48,983,297
CANADA: Domestic Heating	31,779	32,075	75,770	73,628	70,308,305	65,603,462

Domestic Fueloil Customers in Canadian Provinces (Exclusive of oil stoves and ranges)

Prepared by John M. Casey, Dept. Mines and Resources, Ottawa.

	P.E. Island and New Brunswick	Nova Scotia	Quebec	Ontario	Manitoba	Saskatchewan	Alberta & N.W.T.	B. C. & Yukon		Canada Total
1930	394	563	5,722	10,793	1,023	229	15	1,065	1930	19,804
1931	482	543	13,760	14,116	1,148	393	7	1,986	1931	32,435
1932	577	633	16,016	15,640	1,118	419	6	2,539	1932	36,978
1933	1,973	2,496	19,505	24,096	1,059	341	9	3,742	1933	53,221
1934	1,983	2,937	17,191	27,125	1,140	384	6	4,524	1934	55,290
1935	1,906	3,650	8,602	23,440	1,061	293	42	6,450	1935	45,444
1936	2,014	3,498	9,491	24,770	892	217	42	7,922	1936	48,846
1937	1,814	4,404	10,471	23,479	913	230	25	8,983	1937	50,319
1938	2,283	4,181	11,778	15,590	823	282	114	9,522	1938	44,573
1939	2,186	4,454	12,536	23,232	786	339	113	15,008	1939	58,654
1940	2,224	4,729	13,438	26,933	901	395	129	14,066	1940	62,815
	No figures are available for the war years of 1941 and 1942, and only totals for—								1943	32,075
1944	759	1,506	9,061	16,100	534	357	49	3,424	1944	31,779

100 YEARS *of Service*



Michael and Robert Bolda Celebrate 50th Anniversary as Employees of Detroit Lubricator Company

On October 13, 1945, Michael and Robert Bolda, celebrated their 50th anniversary in the service of Detroit Lubricator Company, rounding out 100 years of service between them, having started with Detroit Lubricator Company in the Fall of 1895.

Mike is superintendent of the foundry, and Bob is foreman of the core room. Their work has been with the foundry for the entire time, and they have seen non-ferrous foundry methods develop from the rule of thumb control and hand labor of 1895, to the modern mechanized operation and exact scientific control of modern instruments as used today.

Mike's first job was mixing core sand. He had to "riddle" (sift) it by hand, and mix in the oil and other ingredients by hand shoveling. Then he had to carry it by hand, in boxes, to the core making benches. In 1902 he was given charge of the core room, and in 1910 was made assistant foundry superintendent. In 1916 he became foundry superintendent and began his work of exact control which has made Detroit Lubricator castings noted for high quality. He did it by making exact records of the best conditions for casting each type of piece—by constant experiment to improve castings.

In the early days such instruments as pyrometers were unknown. Metal temperature had to be judged by color and by "vibration" when a rod was immersed in the ladle of molten metal. Very hot metal will vibrate the rod, cool metal will not. A skilled man can check his eye judgment in this way. "Modern pyrometers are much better, however," Mike says, "because eye judgment at its best can ony come within 10 degrees or so of the correct temperature, and then only under the most favorable conditions."

Careful control of metal temperatures, molding and casting conditions, as well as metal mix, has always been of first importance to Detroit Lubricator Company. Beginning with their early products, pressure and other type lubricators, and continuing through automobile carburetors to the present line of refrigeration and heating valves, their products have always required castings of perfect soundness, impervious under pressure test. When Mike took charge of the foundry, scrap losses were high and too many castings had to be remelted because they were not suitable for use. His control methods have since cut losses to a fraction of what they were.

While Mike was pursuing losses in the foundry proper, Bob was doing similar service in making cores. Cores are baked sand shapes placed in the mold to make hollow places in castings. They are made of various kinds of sand plus some binder such as linseed oil or stale beer (in early days); or these days, scientifically mixed core oil. Making them looks as simple as whipping up mud pies, but foundrymen will tell you they are tricky. They can skyrocket scrap losses if they fail to behave properly when the hot metal flows around them in the mold.

Mike and Bob have found Detroit Lubricator Company a good place to work. So have their sons. Mike has three sons and one daughter living. One son works at Detroit Lubricator Company and the other two are in the armed services. Two of Bob's sons work at Detroit Lubricator Company and two are in the army. Bob also has a daughter.

The Boldas are, in many ways, typical of Detroit Lubricator Company people. They stay with the company, contributing their skill and experience toward making the products better as the years go by.

DETROIT LUBRICATOR COMPANY

"DETROIT"

General Offices: 5900 TRUMBULL AVENUE, DETROIT 8, MICHIGAN

Division of American Radiator & Standard Sanitary Corporation

Canadian Representatives — RAILWAY AND ENGINEERING SPECIALTIES LIMITED, MONTREAL, TORONTO, WINNIPEG

"Detroit" Heating and Refrigeration Controls • Engine Safety Controls • Safety Float Valves and Oil Burner Accessories • "Detroit" Expansion Valves and Refrigeration Accessories • Stationary and Locomotive Lubricators

OPA Allows Industry 9% Burner Price Increase

MAXIMUM PRICES for conversion oilburners were allowed to increase 9% over the filed prices of October 1, 1941, with an announcement on January 9 which became effective on January 14. The dollars-and-cents increase may be passed on to the consumer, but no mark-up on this increase is allowed the dealer or distributor. The increase also applies to repair and service parts sold by the manufacturer.

The increase is in Amendment 3 to Order 48 under section 22 of MPR Reg. No. 591. It provides that companies which have no established price as of October 1, 1941, shall file an application for an increase equal to that allowed other manufacturers of a similar burner.

Boiler and furnace units which have been sold for a lump sum in the past cannot be increased by the amount of the burner price increase. Manufacturers who bought a burner to use in such a unit must absorb the price increase in his unit.

Manufacturers who feel that the 9% increase is not sufficient, have the right to apply for further relief from OPA at Washington. He may either ask for a larger percent of increase, or he may use the industry profit factor of 6.5%.

OHI Exhibition Space Three-Fourths Sold

EXHIBIT SPACE for the National Oil Heat Exposition of Oil Heat Institute was more than 71% sold at the start of the year, and new reservations were being made every day, according to officials. The exposition to be held at Philadelphia, April 23-27, is the largest in total space ever sponsored by OHI and its predecessor organizations, and a greater percentage of it already has been sold than at a comparable time for any other show.

According to C. F. Curtin, exposition manager, OHI has made available 266 booths of which 173 had been sold to more than 80 exhibitors before the first of the year. The show committee expects the show to be sold out long before April, to make it the largest exposition ever held by the organization. OHI's largest show up to this time was held at Philadelphia in 1941. The 1946 show will be held at the Commercial Museum, Philadelphia, where the 1941 exposition was held, but will occupy more space.

Plans now are under way to attract an estimated 30,000 people in and around Philadelphia to the Commercial Museum.

The committee in charge of arrangements for the biggest of all oilheating shows is made up of the heads of OHI Divisions and members of the Philadelphia associations. Heading the committee is W. A. Matheson, president of Oil Heat Institute, and vice-president of Eureka Vacuum Cleaner Co. in charge of the Williams Oil-O-Matic Division. Other members are W. A. Kemp, Sundstrand Machine Tool Co., representing the Accessory Division; Carl R. Jonswold, Arrow Petroleum Co., Chicago, representing the Distribution Division; Fred C. Haab, Philadelphia, representing the local Oil Heat Institute; and John A. Morrison, managing director of the Electrical Association of Philadelphia. A. E. Hess, managing director of OHI, is an ex-officio member of the committee, and C. F. Curtin, secretary-treasurer of OHI, is exposition manager.

A partial list of exhibitors who had been assigned space by the end of the year is shown below.

Ace Engineering
Aldrich
American Stove
Anchor Post
Auto. Burner
Bacharach
Bell & Gossett
Bethlehem Fdy.
Burnham Boiler
Century Eng.
Chrysler Airtemp
Coleman of Pa.
Columbia Boiler
Commercial Filters
Delavan Mfg.
Delco Appliance
Dielectric Prods.
Dole Valve
Domestic Eng.
Dongan Elec.
Motor Wheel
Eckhart Mfg.
Eddington
Field Control
Fitzgibbons Blr.
Fueloil & Oil Heat
Fuel Oil News
Friez Instrument
Gar Wood
General Electric
General Filters
General Fittings
Gerstein & Cooper
Guardian Util.
Harvey-Whipple
Heil Co.
Herco
Iron Fireman
Jefferson Elec.
S. T. Johnson
Kresno-Stamm
Lau Blower
Lovejoy
May Oil Burner
McDonnell & Miller
Mercoid
Michigan Tank
Miller Co.
Minn.-Honeywell
Monarch Mfg.
Nat. Airoil
Penn Boiler
Penn Switch
Perfex Corp.
Petrol Corp.
Pet. Ht. & Pr.
Pet. Solvents
Petrometer
Preferred Util.
Quaker Mfg.
Quiet Heet
Radiant Util.
Rajah Co.
C. L. Rayfield
Rochester Mfg.
Scully Signal
Shell Oil
Sid Harvey
Silent Glow
Socony Vacuum
Sundstrand
Taco Heaters
Thatcher Furnace
Timken
Torrington
Tri-Boro Comb.
Triplex Htg.
Tuthill Pump
Viking A. C.
Viking Mfg.
Waterfilm
Watts Reg.
Webster Elec.
Wms. Oil-O-Matic
York-Shipley

PIWC Asks Removal of Oil Price Controls

REMOVAL OF PRICE CONTROL on petroleum and its products will aid the oil industry in supplying this winter's heavy demands for fueloil and serve the interest of the American people by assuring availability of adequate quantities of all needed products, the Petroleum Industry War Council has declared.

PIWC in its final meeting before dissolution as a war-time advisory group to the Federal Government, approved the following statement concerning continuance of price control on petroleum and its products:

"There is more than adequate crude oil production and refining capacity available to meet all currently indicated needs for petroleum products.

"On the basis of stated OPA policy of removing controls and letting competition regulate prices when products are in adequate supply, there is no reasonable ground for continuing to maintain price control on petroleum and its products.

"1941 industry prices, which are the basis for present petroleum product price ceilings, were set at a time when there was need for maximizing gasoline production. Today there is less demand for gasoline and substantially more for kerosene and various grades of fuel oil. However, the price strait-jacket prevents the fluctuation of prices on various products from functioning in the normal manner to readjust product yields and meet seasonal and other fluctuations in consumer demand. Mainly as the result of this, there is a serious prospective shortage of fueloil to meet this winter's needs.

"Supplying this winter's heavy demands for fueloil and serving the interests of the American people in having adequate quantities of all needed products available at all points can best be accomplished by the prompt removal of price control on petroleum and its products. The Petroleum Industry War Council urges that this be done forthwith."

M. W. Bowen has been made general sales manager of the National Thermal Drive Co., St. Paul, Minn., manufacturer of the Multi-Speed Blower Control. Mr. Bowen formerly was with Stainless & Steel Products Co., St. Paul.

Check the truck meter Features YOU want!

Put a check mark against every item listed above—and you'll find the Red Seal "Compact Type" Meter for tank trucks meets all your requirements. For example, do you want . . .

Sustained Accuracy? Neptune "Compact Type" Meters employ the long-approved oscillating piston principle of measuring. In fact, the piston is the only moving part in the measuring chamber—assuring sustained accuracy with minimum of maintenance.

Automatic Cut-off? Deliveries are easy and accurate with the Auto-Stop which *automatically* shuts off flow at pre-set gallonage. Only one operator is needed, time is saved, and spillage and overmeasure are avoided.

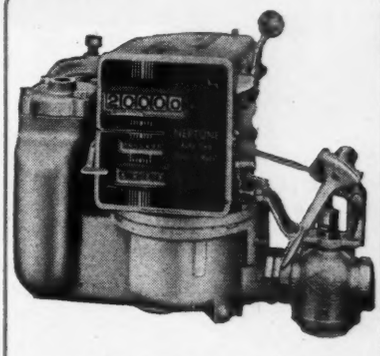
Compactness? The Red Seal "Compact Type" Meter saves payload space and weight. All essential equipment for efficient metering—strainer and air release valve and back pressure valve—are assembled with the meter casing.

Ruggedness? Heavy outside casing protects the entire mechanism—absorbs line pressure—takes knocks and other abuse without affecting the safeguarded measuring chamber.

And so on down the list. Precision engineering and sound construction assure top performance and unsurpassed accuracy—give you the product quality you have a right to expect from your meter investment.

Neptune users find Red Seal metering a practical, error-proof means of avoiding profit losses—speeding deliveries, stepping up service to customers, reducing handling time and effort—ending losses due to spillage or overmeasure.

Investigate the many advantages of accurate, dependable, profit-saving Red Seal Meters. Write for complete information today.



2-Inch "Compact Type" Neptune Red Seal Meter with Print-O-Meter Register. Strainer, air release valve and back pressure valve are assembled into one unit to save valuable payload space and weight. Auto-Stop cuts off flow at pre-set gallonage. Print-O-Meter prints accurate delivery ticket. The Neptune Meter Company does not manufacture or provide delivery tickets, but the usual standard ticket, 4⅛" wide by 7¾" long—the most convenient size to obtain when ordering—can be used. Other sizes may be used if desired.

NEPTUNE RED SEAL METERS

NEPTUNE METER COMPANY
50 West 50th St. • New York 20, N.Y.
Branches: Atlanta, Boston, Chicago, Dallas, Denver, Kansas City, Mo., Los Angeles, Louisville, Philadelphia, Portland, Ore., San Francisco, and Long Branch, Ontario. A-525-4

Expect Sharp Rise in Residential Building

PRIVATE CONSTRUCTION is expected to double in 1946, according to the Bureau of Labor Statistics, with the sharpest increase in expenditures in non-farm residential building. This class of construction is estimated to reach $2,600,000,000 this year, contrasted with $770,000,000 in 1945 and $499,000,000 in 1944.

The peak for residential construction in recent years was reached in 1941 when $2,750,000,000 was spent. Forecasts for this year come close to the 1941 figure and exceed that of 1940 and 1939. Total construction is expected to approach $10 billion, but the Bureau does not say where the lumber, labor and household equipment is to be found for the building boom ahead.

◈

Washington Dinner for Boyd

NEARLY 400 PERSONAGES of the Federal Government, the Congress and Industry hailed William R. Boyd, Jr., as one of Uncle Sam's unsung soldiers in mufti and lauded his leadership in teaming the petroleum industry with government to oil the United Nations' victory at a testimonial dinner in Mr. Boyd's honor at the Statler Hotel, Tuesday evening, December 11, 1945.

The dinner was tendered Mr. Boyd by the Petroleum Industry War Council on the eve of PIWC's dissolution as an industry war agency. Mr. Boyd, President of the American Petroleum Institute, served as Chairman of PIWC for the four years of its existence as the petroleum industry's national war agency created by the Petroleum Administrator for War as an advisory group to the Federal Government on planning petroleum's part in the war.

With the Cabinet, the Senate, the Congress and leaders of the oil industry represented at the speakers' table, Mr. Boyd heard himself hailed as one of the principal forces in the establishment of the greatest Government-Industry partnership in the history of the United States.

◈

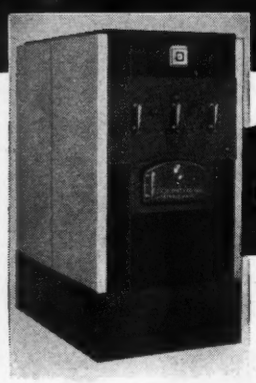
Food Firm Looks to Oilheating Dealers

DOMESTIC OILHEATING DEALERS are the logical outlet for frozen foods, according to a distribution plan which recently has been announced. United Frozen Food Distributors, Inc., has been formed at New York to distribute low temperature cabinets and frozen foods through an organization of franchised dealers across the country, and officials familiar with the oilheating business see this industry as almost the only presently operating business that fits the pattern contemplated for food distribution.

R. F. Horan, president of the new organization, formerly was director of sales education for General Electric, and was instrumental in organizing the Distribution Division for Oil Heat Institute. David Wepman, recently released as an Air Forces public relations officer and formerly with General Electric's advertising department, is secretary and treasurer. Both have had a wide experience in oilheating from the retail as well as the wholesale side.

The organization plans to distribute a line of low temperature cabinets through franchised dealers who will sell and ser-

for lasting



CONSUMER SATISFACTION

Use SMITH-MILLS boilers on jobs from 200 to 2275 feet of installed steam radiation.

Ever since the early twenties when oil burners were first produced commercially, H. B. SMITH has been building boilers for oil firing. Backed by nearly a century of experience in the boiler business H. B. SMITH engineers have kept in step with developments in the oil heating field. Today H. B. SMITH "SMITH-MILLS" boilers introduced just before the war stand at the front of the oil boiler parade. Properly proportioned, highly efficient, built of rugged precision machined gray iron castings, these boilers are just what the oil burner man dreams about. Let them build your business on the sound foundation of lasting customer satisfaction.

H.B. Smith
OIL-FIRED BOILERS

THE H. B. SMITH COMPANY, INC.
Westfield, Mass.
Branch Offices and Sales Representatives in Principal Cities

AN INDUSTRY INSTITUTION

NATIONAL OIL HEAT EXPOSITION

VITAL STATISTICS ON PREVIOUS EXPOSITIONS

Year	City	Paid Booths Taken
*1924-1929 (Inclusive)		
1930	Chicago	100
1931	Philadelphia	122
1932	Boston	96
1933	Chicago	97
1934	Philadelphia	116
1936	Detroit	128
1937	Philadelphia	148
1941	Philadelphia	183

*Shows these years were confined to members of OHI. Beginning 1930 and thereafter the National Oil Heat Exposition was open to the entire Oil Heating Industry including non-members of OHI.

MEMBER OIL-HEAT INSTITUTE OF AMERICA OHI

First Post War Exposition

APRIL 23 TO 27, 1946
COMMERCIAL MUSEUM
PHILADELPHIA

C. F. CURTIN, *Exposition Manager*

SPONSORED BY oil-heat institute of america incorporated

vice the equipment. It also is contemplated that dealers will supply the cabinets with frozen foods in relatively small quantities at about the same frequency as heating oil is delivered to the average home. Such an operation is believed to more closely parallel the present functions of the oilheating dealer than any other established business.

Officials point out that there is a large market for home freezers in rural areas, but the average urban housewife neither has the space for a large storage cabinet, nor the desire to prepare and freeze large quantities of food. Moderate size storage, depending on family needs, supplied on a regular schedule with quality foods is believed to more nearly fit the average urban requirement. The new firm has made arrangements for its cabinets, and has started shipments of both cabinets and foods to distributors.

Best known firms in oilheating who already have taken United's franchise are Allied Oil Co., Cleveland, and Braun Brothers Heating Supply Company for the Chicago area and several other Midwest operators.

NOW! You can easily and quickly assemble couplings in dark or close quarters

NEW L-R "DX"

Wide protective collar guides assembly

IMPORTANT IMPROVEMENTS

in couplings for Oil Burners, Stokers, Air Conditioning, Fans, Pumps, many other applications.

- ***MADE OF TOUGH SYNTHETIC RUBBER***
- **Molded synthetic rubber body a new achievement in noiselessness and flexibility.**
- **Molded jaw receptacle in both ends, accurately fits fan and hub shaft connecting unit.**
- **No metal-to-metal contact. No looseness. No rattle.**
- **New Guide Collar means fast, convenient, correct assembling. A time saver.**
- **Slides into jaws on fan hub in a jiffy. Grips and *holds*.**
- **The simplest, most secure flexible coupling yet made for this field.**
- **Provides *a new element* of customer satisfaction with your installations.**

Made in sizes to fit all applications. Give your customers the benefit of this *better* coupling for longer smoother performance. Write for full details and prices. Other couplings available for all services and duties 1/6 to 2500 h.p.

OHI

LOVEJOY FLEXIBLE COUPLING CO.

5012 W. Lake Street • Chicago 44, Ill.

Directors Discuss Prices And OHI Burner Exposition

DIRECTORS OF OIL HEAT INSTITUTE at their regular quarterly meeting in New York, January 8, divided their chief discussion between a coming increase in conversion oilburner price, and the National Oil Heat Exposition to be held at Philadelphia, April 23 to 27. Though the price increase does not apply to factory assembled boiler and furnace units, Managing Director A. E. Hess reported that price relief for these units is expected within the next month.

President Matheson pointed out that space sales for the oilburner show already have exceeded the total space occupied at any former show, and sales are being made daily.

W. A. Kemp, chairman of the Membership Committee, presented membership applications from Iron Fireman Mfg. Co., Cleveland; Herco Oil Burner Corp., Lancaster, Pa.; Quiet Heet Mfg. Co., Newark, N. J.; and American Mohawk Corp., New York, which were accepted. An application from Domestic Engineering also was accepted for the Accessory Division.

A set of by-laws was adopted for the Distribution Division to become part of the by-laws of OHI, and the constitution was amended to make individual members of the Distribution Division directly affiliated with OHI. An installation code was adopted with changes with the intent of applying the regulations to member installations. Such OHI installations are to be accompanied by a certificate.

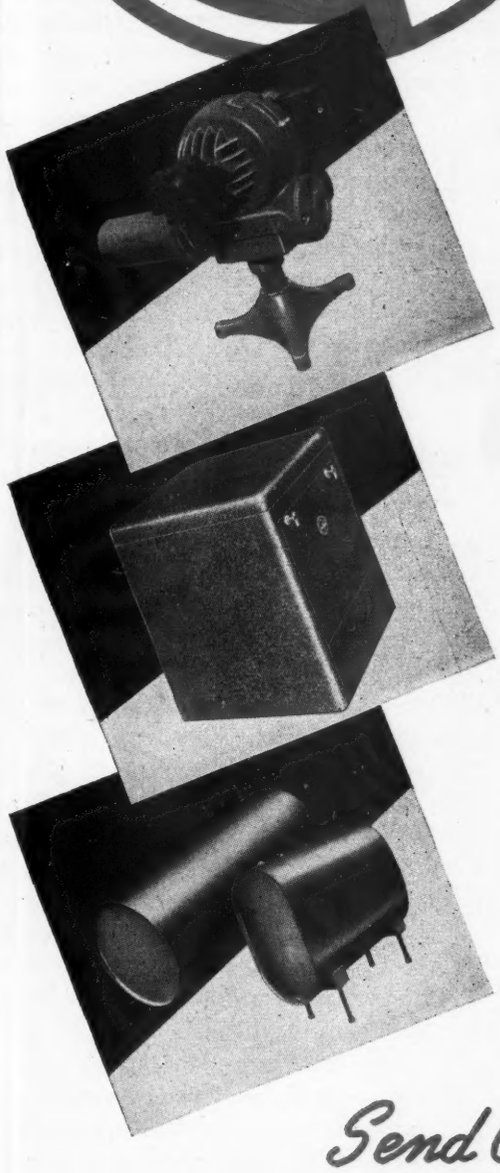
A nominating committee was named consisting of M. A. Powers, Timken; R. F. Fisher, Mercoid; and F. C. Haab of Philadelphia to arrange a slate of directors to be considered at the Annual Meeting. This meeting is to be held at Philadelphia, April 23.

◈

WILLIAMSON HEATER CO., Cincinnati, is distributing a booklet reprint of the talk recently made by W. L. McGrath, the company's president, at the American Management Assn. Conference in Chicago. Discussing a vital current problem, the talk was titled, "How Does Management Look at Cost Control?", exploring the question of wage levels in relation to product output.

THE DEPENDABLE LINE OF OIL HEATING EQUIPMENT

Certified



COUNTERFLOW AIR-CONDITIONER HEATING UNIT

HERE is an outstanding oil burning air conditioner heating unit combining all the features for modern home comfort. Write for full information regarding this outstanding unit and other Certified heating, storage and distribution equipment specially adapted to the oil trade.

Send Coupon NOW!

PLEASE SEND US COMPLETE INFORMATION ON THE ITEMS CHECKED BELOW:

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OIL BURNERS ☐ ☐ UNDERGROUND TANKS
PACKAGE UNITS ☐ ☐ TRUCK TANKS

COMPANY_____

ADDRESS_____

BY_____ TITLE_____

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CERTIFIED HEATING DIVISION
1000 BERRY AVE. ST. PAUL 4, MINN.

fueloil & oil heat

Year May See Changes In Road Transport Laws

STATE TRADE BARRIERS increasing the cost of highway transportation of fueloil and other commodities will be major legislative issues in a number of states during 1946, a survey of the situation shows, with the results expected to attract nationwide interest as an index to whether there will be a revival of the prewar boundary impediments or continuation of the wartime trend toward their removal.

Under pressure from the federal government, the states tore down most of their worst regulatory and tax trade barriers to permit highway transportation to carry out its vitally important war role. Speedy leveling of artificial restrictions was accomplished, for the most part, on an emergency basis, either through temporary legislation or gubernatorial orders issued under wartime authority. Despite unprecedented progress during 1945 legislatures toward the permanent liberalization of state regulations, many of the prewar boundary-line obstacles threaten to return as the wartime measures expire.

While comparatively few state legislatures are slated to convene in regular session during 1946, some of the states in which these sessions are scheduled are key points in the battle against trade barriers. Expectations are that many special legislative sessions also will be called in other states, providing further opportunity to avert a revival of the prewar barrier evil and its attendant huge unnecessary economic losses.

Particular attention will focus on the 1946 Kentucky Legislature, since that state, with a peacetime vehicle weight limit of only 18,000 pounds and similarly unreasonable size requirements, is regarded as the worst highway transportation bottleneck in the nation. Prescribed by a 1932 statute, these virtually prohibitive restrictions, which were temporarily eased under special war emergency permits, will go back into effect unless corrective action is taken by the 1946 Kentucky lawmill. A bill to permanently liberalize the regulations was rejected by the 1944 Kentucky Legislature amid charges that the solons were dominated by the Louisville & Nashville Railroad.

Liberalized size and weight restrictions effected in Massachusetts under a wartime gubernatorial order will expire unless extended by that state's 1946 legislative session. Without legislative action, maximum truck weights, without a permit, will revert to 40,000 pounds instead of being based on the load carrying capacity of the tires as provided in regulations promulgated by the state public works commissioner under executive order. Similarly, the provisions of the wartime regulations which permit a maximum length of 35 feet for single units and 45 feet for semi-trailers will revert to the statutory provisions of 33 and 40 feet, respectively.

That tax as well as regulatory barriers will be increasingly threatening with the abrogation of wartime reciprocity agreements and the elimination of wartime federal pressure to keep the highways free of such curbs was indicated by Virginia's recent notification to other states that it would begin enforcement of its war-suspended 2% gross receipts tax on out-of-state motor freight carriers.

Such a course by Virginia, unless halted by the 1946 Legislature or by other action, may lead to retaliatory action from other states against Virginia vehicles.

GOODALL

"NEWTYPE CORD" Fuel Oil Hose

Delivery costs are *lower* . . . profits *greater* . . . if your trucks are equipped with this non-flattening, easy-to-handle hose. In addition to its patented kink-proof carcass, it has a non-swelling "Synplastic" tube that retains its original diameter under all conditions. The result is a full, fast flow from truck to tank . . . less time for each delivery . . . more deliveries per truck per day. The tough black cover will stand a lot of *extra* wear.

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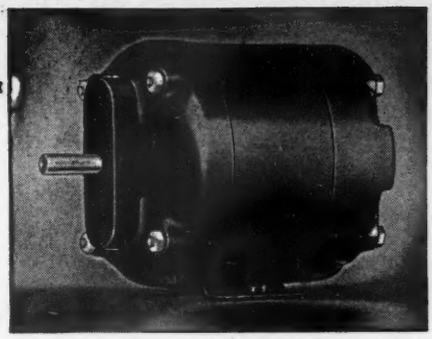
Factory—Trenton, N. J. Established 1870

WE ARE PARTICIPANTS IN THE OWNERSHIP AND OPERATION OF NATIONAL SYNTHETIC RUBBER CORPORATION

A SMALL MOTOR



for General Purpose Applications

Types—Split Phase, Capacitor or Shaded Pole.
Speeds—1100, 1700, 3400 RPM.
Power—1/80 to 1/20 HP, depending on speed.
Voltages—Up to 220 A.C.
Frequencies—60, 50 and 25 cycles.
Bases—Solid, resilient or flange.
Mountings—Horizontal, Sidewall, Ceiling or Vertical, with shaft up or down.
Efficiency—High for such small powers.

OHIO reliable MOTORS

What is your problem?

THE OHIO ELECTRIC MFG. CO.

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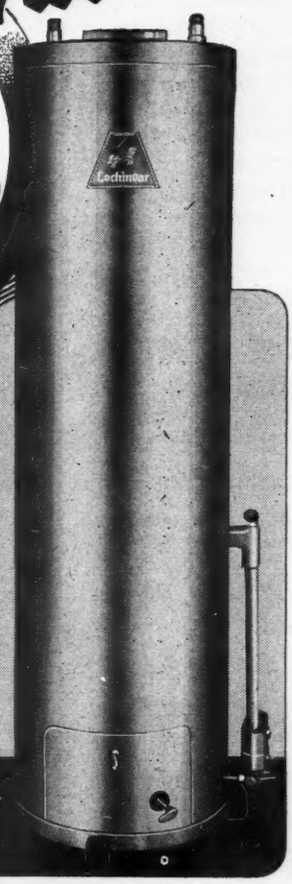
OHIO MOTORS

THE LEADER FOR YEARS

Lochinvar Oil-Fired WATER HEATERS



Automatic hot water at low operating cost. Finger-tip temperature control. Simple design. No moving parts, noiseless in operation. Low dealer service cost. Underwriters' Laboratories label. On the market for years. Thousands of satisfied users. Good looking, high luster finish. Available in 20, 30 and 40 gal. sizes. Attractive dealer's margin. Send for details.

MICHIGAN TANK & FURNACE CORP.
Lochinvar Division
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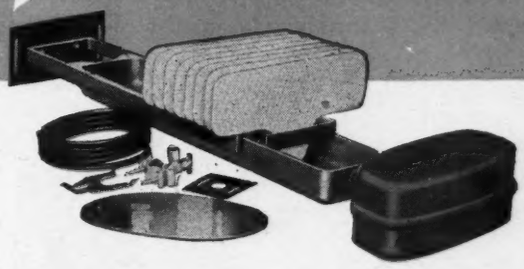
Check these advantages in the New Viking Humidifier

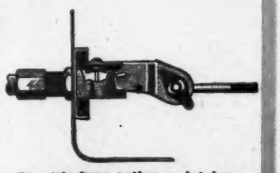
VIKING "TOP SEAT" FLOAT VALVE

COPPER FLOAT TANK



For Dependable Humidification

Positive Action



Throttle type action maintains the proper water level at all times . . . no complicated high and low level actuating points.

For occasional servicing or cleaning the brass wing nut can be loosened and the whole assembly exposed.

Disengage the brass cotter key and the complete float assembly can be removed for inspection or cleaning.

Here is the humidifier you've been waiting for. Simple and easy to install and designed to operate for years with little or no attention.

Exhaustive study and research under actual operating conditions has dictated the need for a simple, easy to clean valve and an acid resisting water supply tank. Viking has the solution.

THE VALVE

Made entirely of brass and located above the water level in the supply tank. Simple rocker action . . . no springs no sliding parts.

THE TANK

Deep drawn from 24 oz. copper in a single piece . . . no seams . . . no welds. Located outside the bonnet or plenum . . . readily accessible for occasional inspection or cleaning.

WRITE TODAY

. . . get complete information and specifications on a dependable humidifier.

Viking

ARMY E NAVY FOR EXCELLENCE

AIR CONDITIONING CORP. 5600 WALWORTH AVE. CLEVELAND 2, OHIO

---

fuelail oil heat

This would return the retaliatory barrier spirals, the evils of which were deplored and widely curbed during the war. Reciprocity made much progress during the war and the erection of new barrier taxes was halted in some significant instances. In Maryland, for example, Gov. Herbert R. O'Conor vetoed a 1945 bill which would have imposed a 2½% gross receipts tax on common and contact carriers. The veto came after the Office of Defense Transportation had assailed the measure as a "barrier to the free flow of commerce" and warned of retaliatory action from other states.

Municipal tax barriers also will become more threatening now that war pressure is gone. Significant in this respect is the fact that Memphis, Tenn., abandoned a proposed new city street use tax measure in 1945 after it had been protested against by the ODT and neighboring states and cities. Memphis Mayor Chandler announced, however, that the measure was being postponed "until the war is won or until conditions are satisfactory for further consideration."

Calling attention to another example of a municipal tax barrier was a brief recently filed with the Virginia Supreme Court attacking the validity of a mileage tax on motor common carriers imposed by the City of Lynchburg. A lower state court held the levy invalid for application to interstate carriers.

Regarded as a hopeful sign that the Wartime demand for trade barrier elimination will be projected into the postwar era is the fact that legislation to liberalize restrictions on motor vehicle sizes or weights, or both, was enacted during 1945 by the legislatures of 21 states—Arizona, California, Colorado, Illinois, Iowa, Kansas, Minnesota, Nebraska, New Hampshire, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, Vermont, Wisconsin and Wyoming. With the exception of Nebraska and Oregon, where the more liberal laws are due to expire in 1947, this legislation was enacted on a permanent basis.

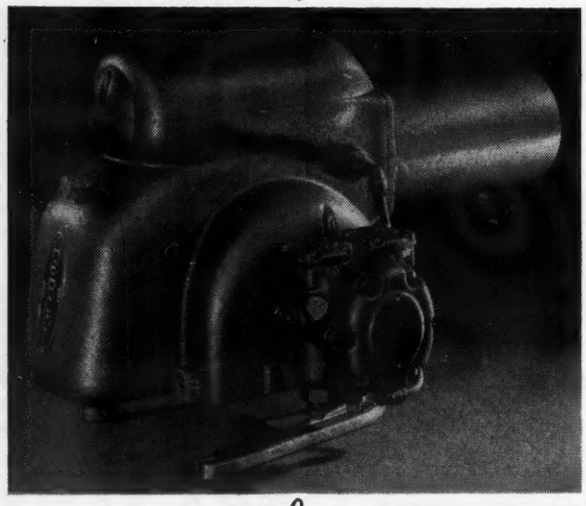
Permanent reciprocity legislation went into effect in 1945 in Maine, Arkansas and New Hampshire, with such agreements being extended by a number of other states. Also during 1945 proposals for higher special state taxes against motor carriers were in most instances rejected.

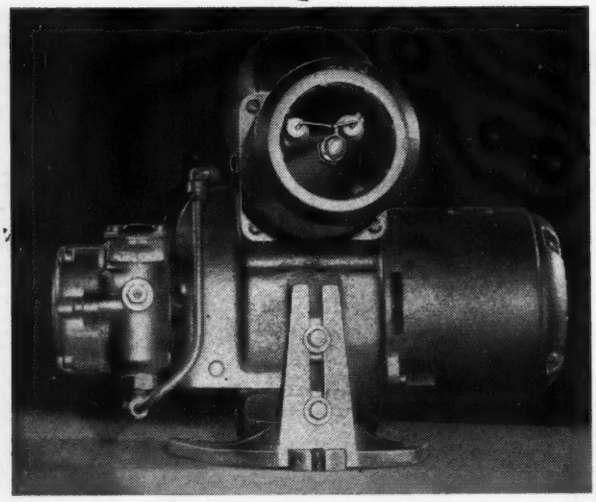
◈

John C. Barnes former manager of the Washington branch for National Rad. Co., has been moved to Philadelphia as branch manager. *Huber F. Seltzer,* veteran of thirty-four years in the sales department replaces Mr. Barnes at Washington.

Seltzer Barnes

Carroll M. Baumgardner, vice president of the U. S. Radiator Corp., was elected a director, and *Howard B. Steggall* was elected a vice president of the corporation at a December meeting.





The famous Herco Residential with Mercoid Visaflame —the burner that builds dealer good-will through customers' satisfaction.

The small volume of Herco Oil Burners which we are now able to produce is being distributed to dealers as rapidly and fairly as possible. Dealers that already know Herco's precision engineering and trouble-free performance are anxious for the time when our increased production can meet the tremendous demand. If you have never sold Hercos, it will pay you to write for complete information and be ready to cash in on early sales.

HERCO OIL BURNER CORPORATION

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Western States Representative:
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Main Office:
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Branches In:
San Francisco, Los Angeles, Salt Lake City, Denver, El Paso

HERCO
The Oil-Thrifty
OIL BURNER

Protective Devices by WATTS for LOW PRESSURE STEAM HEATING BOILER INSTALLATIONS

89 LOW WATER CUT OFF

93 LOW WATER CUT OFF

101 LOW WATER CUT OFF

73 CIRCULATION CONTROLLER

60 LWD—BOILER WATER FEEDER

71 TEMPERING VALVE

1st SELECT PROVEN PROTECTIVE-CONTROL Devices that Fit the Job

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2nd STANDARDIZE ON WATTS DEVICES THROUGHOUT THE SYSTEM

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3rd BUY WATTS UNITS AS A GROUP

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Standardization Pays

For any type low pressure steam heating boiler installation, WATTS has the proper PROTECTIVE-CONTROL devices for the job.

SPECIFICATIONS

WATTS NO. 89. . . . Low Water Cut-off for gauge glass installation. Complete with improved connectors and fittings.

WATTS NO. 93. . . . Popular built-in type Low Water Cut-off to fit any boiler with 2½" pipe tapping.

WATTS NO. T01. . . . Deluxe built-in type Low Water Cut-off with sediment chamber for boilers with 2½" tapping.

WATTS NO. 60LWD. . . . Combined Boiler Water Feeder and Low Water Cut-off for smaller sized boilers.

WATTS NO. 71. . . . Domestic hot water service Tempering Valve. Set to deliver 140°.

WATTS NO. 73. . . . Circulation controller directly controls tank water temperature below 160° F.

WATTS *Automatic* **TEMPERATURE** *and* **PRESSURE REGULATING SAFETY DEVICES**
PROTECT-CONTROL

MANUFACTURERS OF

TEMPERATURE AND PRESSURE RELIEF VALVES · PRESSURE RELIEF VALVES · VACUUM BREAKERS · PRESSURE REDUCING VALVES (WATER, AIR, STEAM) · LOW WATER CUT-OFFS · BOILER WATER FEEDERS · TEMPERING VALVES · HOT WATER HEATING UNITS

THE LARGEST LINE OF ITS KIND IN THE WORLD

Readers' Forum

SID HARVEY, INC.
Valley Stream, N. Y.

Editor:

Your series of articles, "Consumers Talk About Fuels," is the best I've read on the subject. I believe that promotional advertising in the industry should be directed to the main reasons of "why they prefer oil." Along with this we should combat the reasons shown in "why they dislike oil." The real job is to convince prospective users, indirectly, that oil will bring to the user all of the advantages of gas and at much less cost.

The single reason for disliking oilburners "because they are dirty" stands out like a sore thumb, being mentioned more than all the rest of the objections put together. That should make it the number one target in the counter barrage. And while it looks like a cinch to overcome because it simply is not true, just saying that isn't enough; we have to prove it.

I agree with you that careless or jalopy installations can't be blamed for this wide spread impression. However I do not agree with you that the length of the operating cycle has anything to do with it. If oilburners are dirty, they are still going to be dirty whether they operate on a long cycle or a short cycle. The point the industry wants to get across is that the average oilburner installation is not dirty. I have lived with oilburners in my own home for nearly twenty years and I am convinced that the greasy dirt that collects on the walls and curtains over the radiators does not come from the oilburner. It's there all right, and if not from the burner, where does it come from?

Before I answer that let me ask why do some gas users complain of the same condition? (All of them have it, but only a few admit it.) I know and you know that the gas burner is not to blame. Again, why does this dirty condition appear in apartment houses heated from a central station far removed? The answer is the same for all. The grease comes from cooking and is mixed with the dust of ordinary living conditions floating in the air. The air currents rising over heated radiators or ducts deposit it on walls and draperies.

Anybody can prove it does not come from the oilburner by simply going down to the cellar. If the oilburner is causing the soot the condition will be worse there, at the source, than at any other place. Of course you will find dust and dirt in any cellar, but you won't find the greasy film that is so objectionable upstairs, down in the lair of the oilburner itself. That proves conclusively that the oilburner is unjustly accused of a crime it didn't commit.

The survey shows that cleanliness is the No. 1 reason for preferring gas heat and the opposite is the No. 1 objection to oil. We have allowed a false impression to hinder the popularity of oil. We had a "big surprise" when we found that what should have been the oil's greatest appeal was usurped by a competitor. Oil heating is clean heating and it is about time we take effective steps to prove it.

LAWRENCE HARVEY,
Vice-president.

HARVEY-WHIPPLE INC.
Springfield, Mass.

Editor:

Apropos the question of radiant heating, there is rather an interesting article in the National Geographic, October, 1945, captioned, "Jap Rule in a Hermit Nation," by Willard Price.

(*Continued on page* 90)

Less weight, lower maintenance costs

– with Heil Truck Tanks

. . . and bigger payloads, lower delivery expense for you!

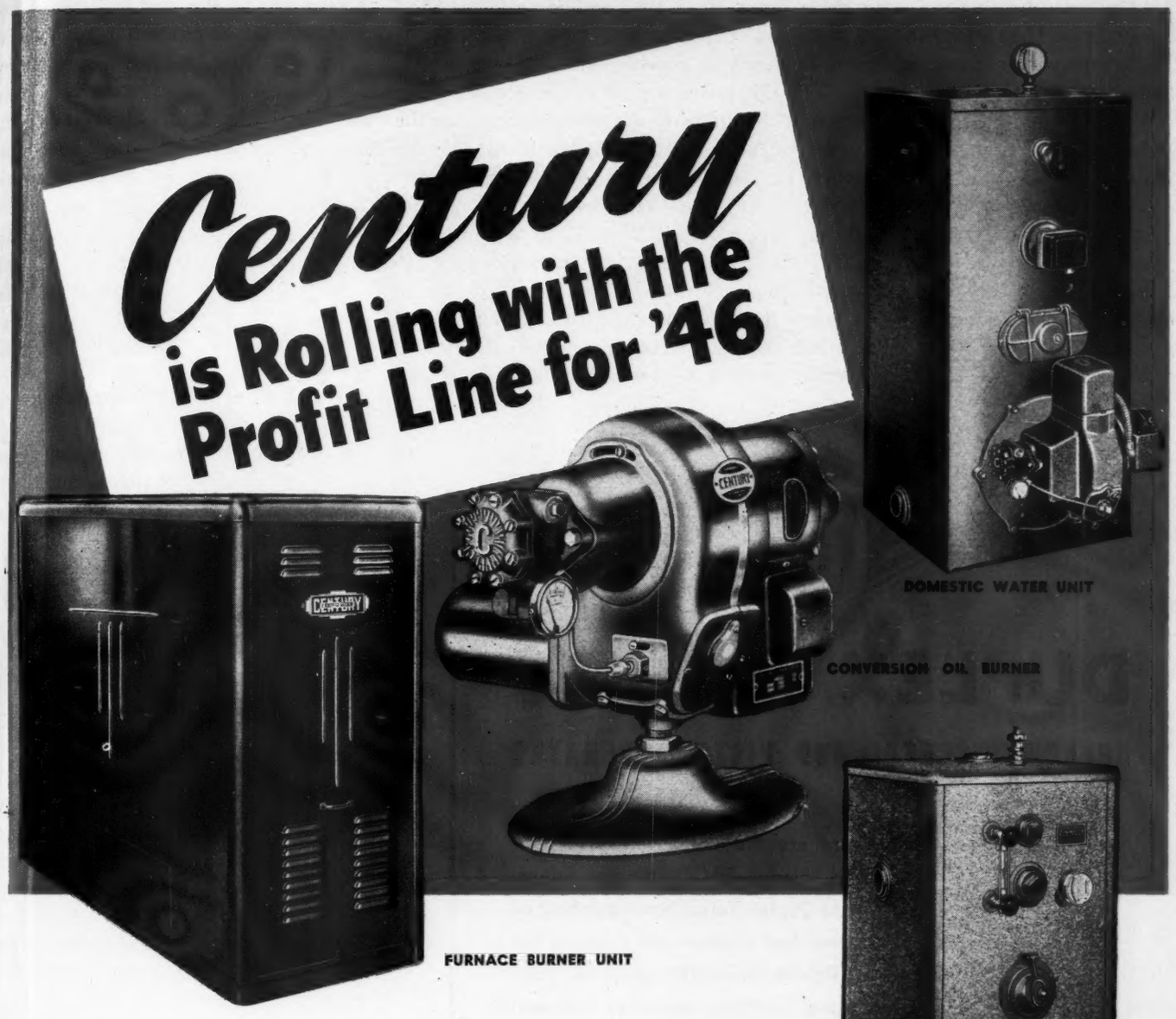
Famous Heil design features like these prove their value when you "add up" at the end of the year: **1.** Tank, sub-frame, skirting, and piping are one integral, welded unit — with no stress, strain, or twisting action to result in costly maintenance delays. **2.** Dead weight is reduced and payload increased by using many component parts for dual purposes. **3.** Greater strength is the result of a beam-like one-piece smooth-skin wrapper shell construction. **4.** Many other features—including weatherproofing, streamlined beauty, flexibility, and ample advertising space — that make these units especially desirable and profitable to operate.

SEND FOR FULL DETAILS TODAY

T-182

THE HEIL CO.
GENERAL OFFICES • MILWAUKEE 1, WIS.

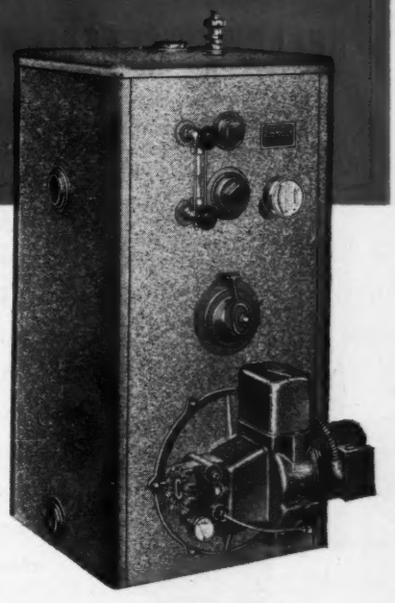
Century is Rolling with the Profit Line for '46



DOMESTIC WATER UNIT

CONVERSION OIL BURNER

FURNACE BURNER UNIT



BOILER BURNER UNIT

THE Century Line of oil-fired heating equipment is now fast becoming available. Manufacturing skill, years of research and scientific advancement all contribute toward making Century's new and improved equipment a leader in the field. Alert, profit-minded dealers will find the new line of Century units quality merchandise that assures satisfied customers. There is quality at low cost in the units shown, which are now available in limited quantities. New efficiency and economy of operation cuts heating costs. As more materials become available our production output will be increased in quantity, and in the number of models manufactured. You will profit by joining the thousands of dealers now selling Century oil-fired heating units.

Several distributorships in excellent territories are now available for progressive dealers interested in profitable selling with the Century Line.

CENTURY ENGINEERING CORP.

CEDAR RAPIDS, IOWA

OIL BURNERS • BOILER-BURNER UNITS • WARM AIR FURNACES
HUMIDIFIERS • WATER HEATERS • AIR CONDITIONING

He was discussing being entertained in a Korean home. Here is a quote from page 438. Perhaps you have seen it. It was a bit interesting to me:

"We sat on the floor. The autumn air had been chilly outside, but now a delightful warmth began to pass up through me. It seemed to be coming from the floor. And then I became acquainted with one of the cleverest inventions of man since the Age of Fire began. It is the heated floor. America and Europe, for all their ingenuity, know it not. The Chinese have something like it, the 'Kang,' a heated brick divan. By living on top of the Kang and stepping down on the cold floor as rarely as possible, one may keep reasonably warm.

"But the Korean invention has gone the Chinese one better. The entire floor becomes a Kang. Who has not suffered from cold feet and a hot head from an unevenly heated room? Since cold air falls and forces up warm air, it would seem elementary that the heat should come from the floor, and from parts of the floor and not just a register in one corner. This very obvious fact seems to have struck the Korean and no one else. And he has very simply solved the problem by running the hot smoke from his kitchen stove under the floors of the other rooms and to the far side of the house where at last, its heat exhausted, it is allowed to escape.

"By using what we throw away, he keeps his house warm."

W. O. HARVEY,
President.

◈

Westby, Wisc.

Editor:

I wish to express my appreciation of your publication. Other trade papers are so often only an excuse for getting across a lot of manufacturers' advertising. FUEL-OIL & OIL HEAT every month has several articles which are of immediate value to anyone in the heating business.

Comparatively new to the business, I really profit by being a cover-to-cover reader. "Readers Problems" is good, also recent articles on "High Rate of Chill" can save one a lot of trouble. Every article has definite value.

CARL FRIETAG.

◈

A. B. CUNNINGHAM & SON
Baltimore, Md.

Editor:

I certainly wish to congratulate you on the articles on vaporizing burners, by Frank J. Coonan.

You are absolutely right. There is nothing wrong with most vaporizing burners except the installation and service that they receive. Poor oil during the war has been difficult to handle, but this is not the biggest part of the story. The vaporizing burner certainly has a place in the market, although pressure type men would have it the other way. Perhaps the fundamental underlying cause for this attitude is that they have nothing to sell when less than a gallon input is required. Regardless, the very souls of many dealers and service men are soured on all vaporizing equipment. As you point out, this is a ridiculous attitude in view of the fact that thousands of dollars are spent by manufacturers to build and promote it who absolutely know that it is quite satisfactory if installed and serviced properly.

I talk to a lot of service men out in the field and I find that most of them are cool

EDCO

DUPLEX VALVES

BELLOWS, SLEEVE AND PISTON OPERATED

Here are the finest valves of their kind made—EDCO Single Adjustment Duplex Valves for regulating oil burner fuel pressure and stopping the oil flow to the nozzle during the "off" period. Skillfully made of the best materials—the outer casting of close non-porous brass, the valve needles of stainless steel, the valve seat of special alloy bronze. Edco valves conform to Underwriters' Laboratories' standards for use on burners operating as high as 150 pounds oil pressure. Styles for every requirement, including replacement.

OIL BURNER NOZZLES AND NOZZLE KITS

Edco nozzles—of the same dependable quality are available in a wide variety of sizes. *Performance guaranteed.* Also specially designed Nozzle Kits, in pocket size and larger.

Write for complete information

EDDINGTON METAL SPECIALTY CO.
P. O. BOX K, EDDINGTON, PENNA.

Getting prompt deliveries on burners is important, of course. But more important still is the question of which line you will be identified with in the highly competitive years ahead!

Established Rexoil outlets will be supplied just as rapidly as the present material shortages clear. Our urgent recommendation is to *place your orders now!* "First come, first served" must be our policy in serving those distributors and dealers seriously interested in the tremendous future possibilities of the complete Rexoil burner, boiler and furnace line.

One of the oldest and best-known lines in America . . . over 60,000 units in service . . . new features and completely wired, easy-to-install construction . . . powerful and generous factory sales and service cooperation . . . these are some of the advantages you may expect with Rexoil. Write, wire, order NOW.

REIF-REXOIL, Inc.

37-41 Carroll St., Buffalo 3, N. Y.

toward this type of equipment. However, I have discovered that the reason they feel this way is that they don't know anything about it. Proof of this is that after I have made considerable effort showing them why vaporizing burners won't work and give them some instruction in the servicing and installation, they come back to me after a heating season and admit that "It's a pretty good little burner," and then start telling me some of the experiences they have had the past season and how they corrected the trouble.

As for myself, I'd like to have someone show me one of our own burners that I can't make work to utmost satisfaction. It's sometimes necessary to rework the entire job, but I can do that if necessary. My job is primarily working with dealers and service men in connection with our own equipment. When they won't cooperate with me and pay some attention to what I tell them, I finally have to cease relationship with them because I know that they are heading me for trouble as well as themselves.

I spend most of my time working with dealers and service men. I think if other distributors and manufacturers would keep more men in the field with their dealers and handle the matter as I do, it would help out a lot. I really have no service problem with my older established dealers, because I've seen to it that they know the whole story. It is the new dealers and jack-leg service men that I have to watch.

In conclusion, let me say again that it was a pleasure reading the articles. Let us hope that you will continue to publish articles of this nature for the trade to read. Perhaps through this means, sort of an educational program will be effected and will wake up a number of these dealers and service men to the fact that their attitude toward vaporizing burners is due solely to their own ignorance, and it may inspire them to learn a little more about them before they criticize.

W. E. CUNNINGHAM.

SEND FOR BULLETIN:
DONGAN
Oil Burner Ignition
TRANSFORMERS
"The Dongan Line Since 1909"
"Standard Designs of Ignition Transformers"
Complete with specifications and engineering data for gas and oil burner ignition.
Order a Sample Transformer for Your Pilot Model.
DONGAN ELECTRIC MFG. CO.
2981 Franklin
Detroit 7, Mich.
The Dongan Line Since Nineteen-Nine
WRITE FOR LITERATURE
DONGAN TRANSFORMERS

Story of Oil in War Recorded by Artists

THE STORY OF "OIL—1940-45," recorded in paintings, water colors and drawings as an educational project by well-known American artists, went on exhibition Jan. 6 at the Associated American Artists Galleries, 711 Fifth Avenue, New York. The show will continue through Jan. 19, and will later be shown at schools and colleges throughout the country.

Canvases portraying oil as it comes from the ground, from the Arctic Circle and jungles; the conversion of oil to finished products and its transportation are part of the collection. Of especial interest are those paintings by artists who traveled to war theatres as combat correspondents and recorded their impressions of the transportation of oil on the seas, over the Ledo-Burma Road, into Russia through Iran and across Europe.

A painting by Lawrence Beall Smith depicts fuel for the Army Air Forces passing through the wrecked village of Isigny, and another, "Normandy Landscape" shows GI's unloading Jerri-cans in a Normandy field. The transformation of Khorramshahr, Iran, from a tiny fishing village into an important harbor by United States engineers is the subject of a work by Bruce Mitchell.

Commissioned by the Standard Oil Company (New Jersey) through the Associated American Artists, the project was executed by sixteen artists.

KNOWN AND USED THE WORLD AROUND

Aldrich Oil Burners and Burner-Boiler Units were standard equipment in United States Insular Bases the world around. That's proof of unmatched efficiency, performance . . . All during the war, Aldrich Co. worked night and day at their regular job—producing extra-value burners and burner-boiler units . . . Post war improvements are facts—not promises—in Aldrich equipment.

HEAT-PAK Burners Models AX and BX

Embodying famous Aldrich features, HEAT-PAK Model AX (.75 to 4.00 G. P. H.) and Model BX (3.00 to 8.00 G. P. H.) are being produced as fast as materials become available . . . Production of famous HEAT-PAK Burner-Boiler Units and oil-fired Water Heaters is limited only by manpower and materials.

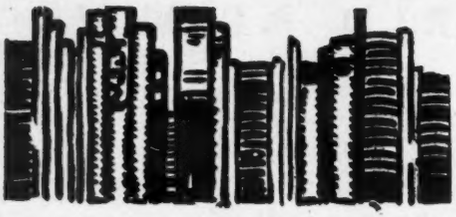
SERVICE-FREE

Aldrich engineering genius, designing skill, and production experience combine to give you equipment that is practically service free. No wonder Aldrich led the industry in prewar volume! Look to Aldrich for leadership in oil-fired equipment.

Aldrich

COMPANY

WYOMING, ILLINOIS



THE BOOK SHELF

Any of the books reviewed in this section may be ordered at the stated prices from FUELOIL & OIL HEAT, 232 Madison Ave., New York 16, N. Y. Please send remittance with your order.

Efficient Fuel Use

INDUSTRIAL FUELS, their nature, and efficient utilization, are thoroughly covered in a new book, "The Efficient Use of Fuel," just published. The volume is intended as a textbook for students and a reference for all technical men concerned with fuel burning.

This book is a reprint, with few revisions, of a British text, and therefore is chiefly concerned with coal burning. The use of oil and gas is treated in a chapter on each fuel, and the general subject of space heating gets another chapter.

As a reference book for men concerned with industrial heat, this text is most valuable. It is complete, and contains a wealth of technical information and illustrations.

The Efficient Use of Fuel, 807 pages, Chemical Publishing Co., Brooklyn, N. Y., price $8.50.

Piping Handbook

PIPING HANDBOOK, a volume of nearly 1400 pages has been issued as a text and reference for the engineer, designer and contractor. It is unusually complete in its coverage of the subject from industrial applications to the smallest use. Included are data on steam and power plant piping, heating and plumbing systems, oil and gas piping, water distribution and even hydraulic systems for aircraft.

Edited by Sabin Crocker, senior engineer, Engineering Division, Detroit Edison Co., the book covers fundamentals, materials, design and installation in addition to cost analyses, standards, specifications, charts and formulas.

Piping Handbook, 1376 pages, McGraw—Hill Book Co., New York. Price $7.00.

Boiler Room Answers

QUESTIONS AND ANSWERS on industrial and commercial boiler problems are contained in a new book which is designed to give a concise and readable approach to the various questions that may arise. Due to its form or presentation, the book is of value to men who are studying for operating engineers' certificates, and it also will serve as a reference work for plant owners and operators. There is no material in it on domestic heating.

The book was written by Alex Higgins, consulting engineer and director of Engineering Extension Courses, Provincial Institute of Technology, Calgary, Alberta.

Boiler Room Questions and Answers, 139 pages. McGraw-Hill Book Co., New York. Price $3.00.

Reprint Book Combines Burner Service Articles

A SERVICE GUIDE to the operation and maintenance of oilheating systems is the aim of a new reprint book which brings together the most helpful articles on domestic oilburner service that have been published in FUELOIL JOURNAL, AIR CONDITIONING AND OIL HEAT, and during the last three and a half years in FUELOIL & OIL HEAT. Since the reprinted ar-

Fulflo FILTERS

"Speaking of Size..."

SAYS FULFLO JO

"It's all relative. Take this big filter I'm leaning against. It filters hundreds of gallons per minute of hot lubricating oil for a huge Navy Diesel Engine – It *has* to be big."

"I like the cover, too," says Joe, "it rides on the fuel line and when I loosen the capscrews the shell drops off in my hand with the used Honeycomb Tube and the muck and sludge all ready to dump – without getting anything messy – including me.

And when I put in the new tube and pull out my little wrench and set up those four capscrews I know that not a single drop of oil will ooze out till I come back next Fall!"

"But if this little feller I'm holding in my hand will give complete protection for a full year on a household oil burner – why use anything bigger? Especially when its small size is due to the remarkable filtration efficiency of its genuine Honeycomb Filter Tube. I like this little FULFLO FILTER. I know when it's on the job I won't get called in the middle of the night for fouled points or a clogged nozzle."

"When I put a FULFLO FILTER on a burner I always say to myself – 'Well, Jo . . . there's another job you won't have to worry about.' "

IF NOT AT YOUR JOBBER'S WRITE TO

Commercial Filters Corporation

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AGENTS IN PRINCIPAL CITIES

FULFLO FILTERS SAVE SERVICE CALLS

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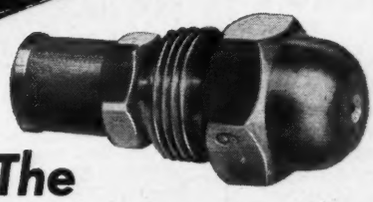
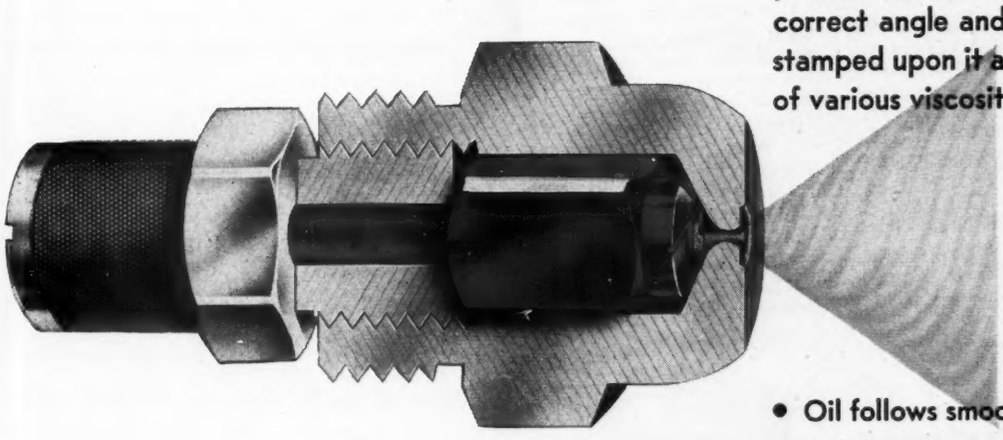


The GOVERNOIL NOZZLE

Many years of successful service have proven that the Governoil Nozzle provides correct angle and spray, delivers the rating stamped upon it and keeps variance with oils of various viscosity at a minimum.



- Oil follows smooth curves.
- Improves "spin".
- Decreases friction.
- Decreases pressure loss.
- Atomizes thoroughly at lower pressures.
- Holds correct spray angle at all pressures.
- Capacities 0.6 to 6.0 gallons.
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fuel oil & oil heat

ticles assume a basic knowledge of oilburners on the part of the reader, the book is not an elementary service text, but more a reference for experienced service men. There is a wealth of basic material on oilburner motors, pumps, valves and controls, but the articles on burner adjustment takes for granted that the reader is familiar with the business.

Sections of the book cover combustion chambers and firing rates, draft problems, wiring, motors, controls, nozzles, pump units, baffling, and adjustment for better overall efficiency. Twenty-nine service stories and a number of short service hints make up the text. Original illustrations, charts and diagrams are included. The book is recommended for all men who are working in the installation and service of oilheating equipment. It is non-technical and easy to understand.

Better Oilheating, 96 text pages, published by FUELOIL & OIL HEAT, New York. Price $2.00.

OIL DEALERS!
A decided swing to GAS HEAT is making a noticeable cut in your prospective oil heat market. A recent survey indicates that 2 out of 3 dissatisfied owners of oil burners place the blame on foul odors and dirty operation. These advertisements will show you how KLEEN-FLO can give premium Oil Burner performance and keep customers satisfied. More service departments use KLEEN-FLO than any other product because it has proven its true worth on actual jobs over a long period of time.
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NOW it is possible to eliminate complaints of foul odors and carbon deposits made by the use of space heaters, range burners, hot air furnaces, etc.
FOUL ODORS are caused by incomplete combustion, the products of which are toxic and probably contain aldehydes, formaldehydes and carbon monoxide. The addition of KLEEN-FLO to kerosene or range oil promotes complete combustion and will eliminate foul odors immediately. CARBON DEPOSITS are mainly caused by thermal decomposition due to poor intermixture of oxygen with oil vapors.
KLEEN-FLO acts as a "marrying agent" which promotes intimate intermixture and results in a clean, hot oil fire.
In this way carbon and soot deposits are held to a minimum. Just as Air Conditioning does more than remove foul, dirty air, so KLEEN-FLO FUEL OIL CONDITIONING does more than remove water and sludge.
KLEEN-FLO PROMOTES COMPLETE COMBUSTION — IT HELPS TO MAINTAIN A CLEAN AND EFFICIENT OIL FIRE.
Write today for literature which will show you how KLEEN-FLO can make EXTRA profits for you.
The next advertisements will outline the use of KLEEN-FLO in Domestic, Commercial and Industrial Oil Heating systems.
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California office: 1315 Gordon St., Hollywood 28, Cal.
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Bulletin Tells Users of Chimneys and Fireplaces

CHIMNEYS AND FIREPLACES, the one a necessity of every home, and the other a luxury, and both a little-known part of the house to the average home builder, are the subject of a new free circular issued by the Small Homes Council at the University of Illinois.

The eight-page non-technical publication is liberally illustrated. Warning that a chimney is difficult to remodel and should be built correctly the first time.

The bulletin gives home builders sound advice on the construction and location of a good chimney, and warns that a fireplace is only 10% efficient and a luxury.

Airconditioning Engineers' Atlas

THIS COLLECTION of original maps and tables, the result of intensive study of the enormous masses of existing weather figures, makes available in condensed, graphic form the data on climate and weather which are directly applicable to heating or cooling problems.

For the heating and airconditioning engineer, the atlas furnishes extreme weather data required in calculating plant capacity. For the operating engineer, it provides average climatic data for predicting operating quantities and obtaining good results.

In each of the 18 sections of the book, nine dealing with winter conditions and nine with summer, there is a specially designed zone map in colors and one or more tables. The maps give weather conditions for every section, including thousands of small localities. The tables contain supplementary data applying to the larger cities and their environs.

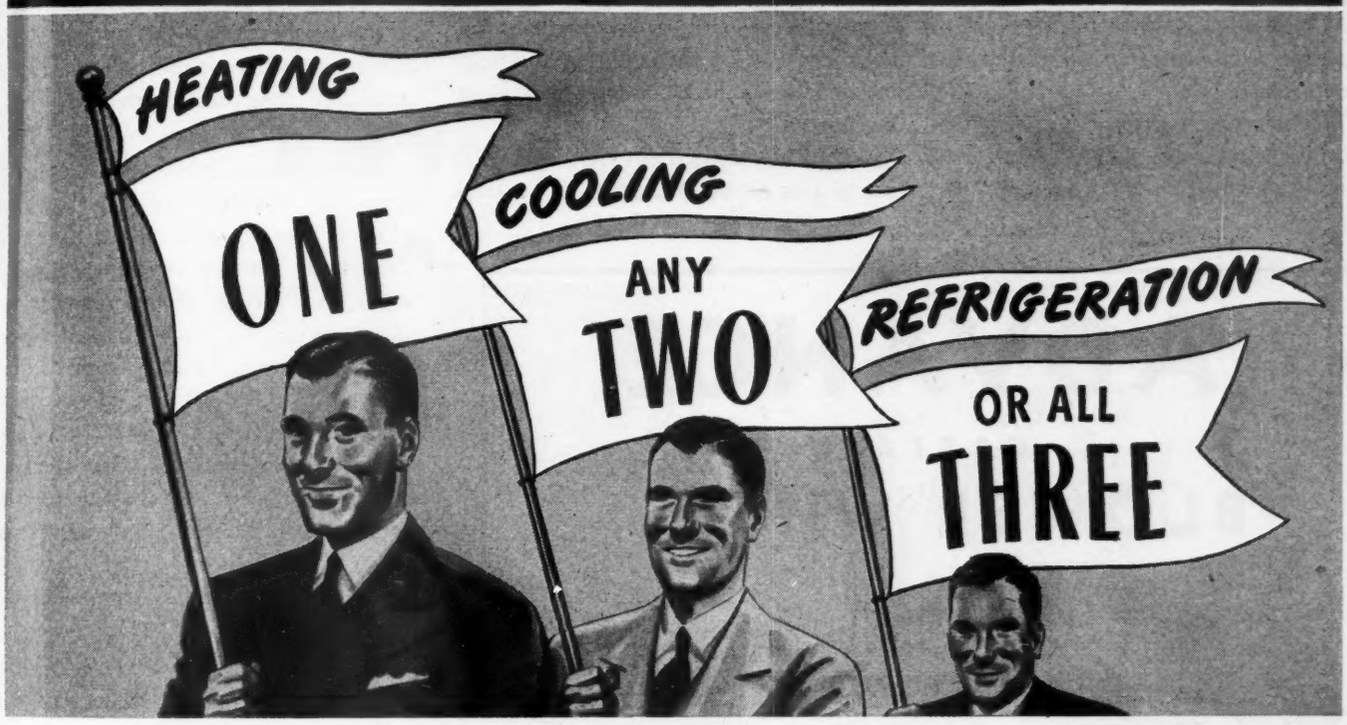
The Airconditioning Engineers' Atlas, published by The Industrial Press, New York. Price $2.00.

Henry Buys Mayn Air

HENRY FURNACE Co., Medina, Ohio, manufacturers of Moncrief heating equipment, pipes and fittings, have acquired the exclusive rights to the Mayn Air damper.

Installed in the stack head, the Mayn Air takes the place of dampers customarily placed in basement ducts. Introduced in 1940, these dampers have been installed in thousands of air conditioning systems in all parts of the country.

CHRYSLER AIRTEMP



Up Front in the Profit Parade

It's top policy at Chrysler Airtemp to be ever mindful of dealer profits. Everything—products, advertising, merchandising—is planned with this goal in mind.

A good example is the Chrysler Airtemp dealer agreement. Flexible, it is streamlined to fit any type of dealer in the heating, air conditioning and refrigeration fields. There's an agreement for any one Chrysler Airtemp line, any combination of two—or for all three! Here's opportunity for year 'round profitable dealer operation.

All products of Chrysler Airtemp are engineered, designed and mass produced for the volume markets—the places of greatest sales. It's "package" merchandise, priced right, easy to install and with a reputation for low upkeep and operating cost. Behind these products is Chrysler Corporation with its great reputation for engineering excellence and mass production skill.

Such products, prestige and company policy are putting Chrysler Airtemp dealers up front in the profit parade—and will keep them there. It will pay you to investigate now! Write to the Airtemp Division of Chrysler Corporation, Dayton 1, Ohio. • In Canada—Thermo-Rite Products, Ltd., Toronto, Ontario.

Invest In Your Future! Buy U. S. Savings Bonds. REMEMBER THURSDAY NIGHT! The music of Andre Kostelanetz and the musical world's most popular Stars—Thursday, C.B.S., 9 P.M., E.S.T.

AIR CONDITIONING
HEATING • COOLING • REFRIGERATION

fueloil / oil heat

FHA Has Insured Nine Billion Loans

MORE THAN 20,000,000 AMERICANS have been enabled to improve their housing conditions through the insurance by the FHA of over $8,700,000,000 in mortgages and loans advanced by private capital, Commissioner Raymond M. Foley of the Federal Housing Administration has announced.

"These people represent nearly 6,700,000 families or over one-fifth of the total non-farm population of the country," Mr. Foley said. "In a little more than eleven and one-half years, over $6.8 billion in mortgage loans have been advanced for the purchase or construction of nearly 1,675,000 family dwelling units, while about $2 billion has been advanced to more than 5,000,000 property owners, enabling them to repair, improve and modernize their properties, thus maintaining them in a livable condition and helping to preserve the Nation's existing housing inventory."

Mr. Foley pointed out that as gratifying as this record is there is still a large backlog of new home construction and property improvement needed which must be gotten under way as soon as materials and manpower permit.

Persons who financed their homes with an FHA-insured mortgage all have been given the benefit of an unbiased FHA appraisal of the property, an examination of the neighborhood and in the case of new construction, inspections to see that minimum construction standards were met.

The loans are retired by equal monthly payments, covering all fixed charges, which in many cases are less than rent for comparable properties. For instance, under the FHA program more than half of the million and one-half home owners purchasing single family houses are now paying for them in installments of less than $40 a month. In 1941, the last reasonably normal building year, 40 out of every 100 owners were paying for their homes and meeting all fixed charges with monthly payments of $30 to $40, while 28 out of every 100 were paying less than $30.

Mr. Foley said the FHA is not only broadening the field of its mortgage insurance operations to encourage further building of lower cost houses, but is also in a position now to help property owners start catching up on badly needed repairs and improvements which had to be deferred because of manpower and material shortages during the war.

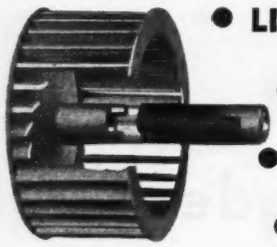
"Undoubtedly there is a great backlog of such needed repairs," Mr. Foley said, "and making them as the materials become available will do much to preserve the existing housing supply while new construction gets under way to catch up with the great accumulated demand for new housing. Owners of structurally sound houses now can install a new kitchen, bath room, plumbing or heating systems; a new roof, a new paint job, in fact, make many repairs or improvements to the homes they now occupy."

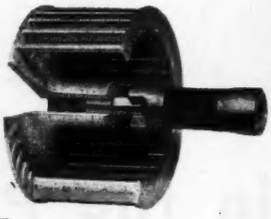
The repair and improvement program is operated under Title I of the National Housing Act with some 4,500 qualified lending institutions throughout the country cooperating. Such loans are repayable in monthly installments over a period which may run for 36 months. The average Title I loan in the past has been for between $300 and $400.

ADVANCE

CASTALU

BLOWER WHEELS





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MAXIMUM EFFICIENCY

Castalu Fans are lighter in weight, strong and durable. They are quiet and require a minimum of power for starting and operating. All fans are machined completely and balanced.

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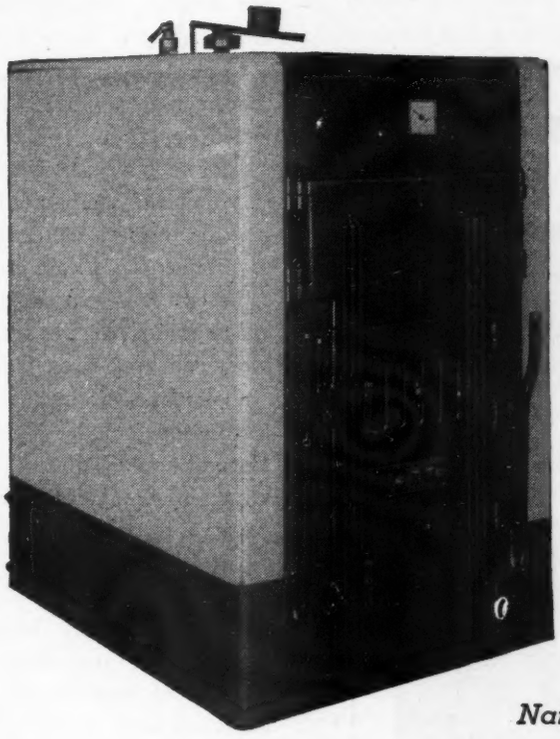

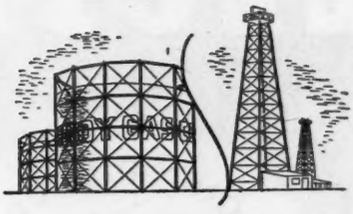

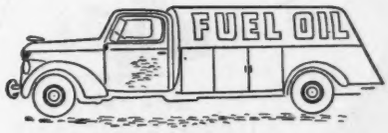

No. 3 of a series,
National Heat Extractors

National Heat Extractor boilers are *engineered* to operate at high performance levels when fired with coal, gas or fuel oil. Important, too, is the fact that they can be converted—after installation—from hand to mechanical firing without reduction in rating.

The No. 3 Series National Heat Extractor illustrated is especially designed for larger homes and commercial installations. Remember—there's an NRC heating product to fit every building need!

Write for your copy of our new booklet, "Plan to Be Comfortable." There's no obligation, of course.

The NATIONAL RADIATOR Company

JOHNSTOWN, PENNSYLVANIA

fuel oil & oil heat

Navy Fueloil Demand Continues to Mount

AS A RESULT OF A HEAVY increase in Navy requirements of special fuel oil for the first quarter of 1946, necessitated by the use of combat vessels to return American troops to this country, Deputy Petroleum Administrator Ralph K. Davies called a meeting of representatives of principal West Coast refineries to discuss with representatives of the Navy and the Petroleum Administration for War the problem of meeting this new military demand. The meeting was held at Los Angeles at 10 a.m., January 4.

Mr. Davies sent the following wire to the heads of West Coast refineries:

"Due to use of combat vessels for return of service personnel Navy have increased first quarter Navy special fuel requirements 70,000 b/d. After taking advantage of all other possibilities worldwide including resumption of tank car movements from District IV (Rocky Mountain area) it will be necessary for District V (West Coast area) to supply during first quarter 106,000 b/d as compared to 64,000 b/d now under contract. We estimate this would require crude oil production of 885,000 b/d and refinery operations of 825,000 b/d which represent substantial maximums in both cases under present conditions. We recognize problems involved, especially added gasoline production, and have discussed with Navy who have agreed in principle to assist in moving gasoline, production of which would be a limitation in increasing crude runs.

"For discussion of this urgent problem we ask that you have qualified representative of your company attend meeting with Navy and PAW representatives in Los Angeles, 10 a.m., Friday, January 4, at a location to be later announced.

"The Navy assures us that these fuel requirements are essential to their projected operations and take into account maximum Navy stock withdrawals. We call upon the companies to do everything possible to meet these increased military requirements. Please advise who will represent your company at the meeting. I am sending telegrams to presidents of other principal West Coast refineries."

Companies to which the telegrams were sent include: General Petroleum Corporation, Richfield Oil Corporation, Union Oil Company, The Texas Company, and the Wilshire Oil Company, all of Los Angeles; Standard Oil Company of California, Tidewater Associated Oil Company, Mohawk Petroleum Corporation, and Shell Oil Company, Inc., all of San Francisco; the Hancock Oil Company, of Long Beach; and the Rothschild Oil Co. of Santa Fe Springs.

Discussing the proposed meeting to boost West Coast production of crude and fuel oil, Mr. Davies emphasized that the required increase of 75,000 barrels a day in both crude production and refinery operations over previously estimated operations was due entirely to the "magic carpet" program of bringing troops home on combat vessels.

Mr. Davies expressed confidence that the West Coast oil companies would do their utmost to supply the portion which must of necessity be produced by West Coast refineries, due to the fact that all other fuel oil producing areas world-wide will be operating at practically maximum.

"The oil industry toiled unremittingly to help bring the war to a successful conclusion," he said, "and I am confident it will do all in its power to speed return of the men who made victory possible."

TO A USER the Electrol Ball Flame means years of quiet, clean, efficient heating service. It means performance that is long in comfort and low in operating costs.

TO A DEALER the Electrol Ball Flame stands for thousands of satisfied customers, continuous sales and profitable business. The Electrol story demands attention. Sell a burner that is different. Sell a burner with exclusive sales points. Sell Electrol.

ELECTROL BURNER MANUFACTURING CO., INC.

22 UNION AVENUE

RUTHERFORD, NEW JERSEY

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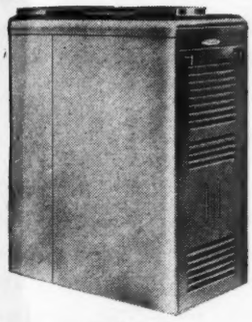
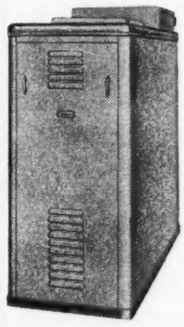
MONCRIEF'S New 1946 Line

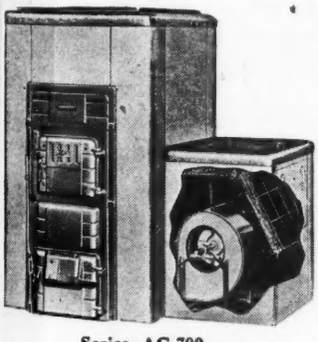
OF GAS-FIRED FURNACES AND AIR CONDITIONING UNITS



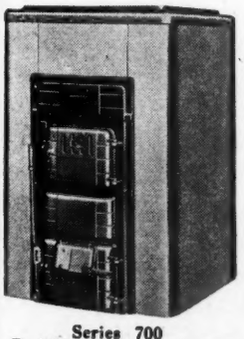
Series G
Gas-Fired, Cast Iron Air Conditioning Unit



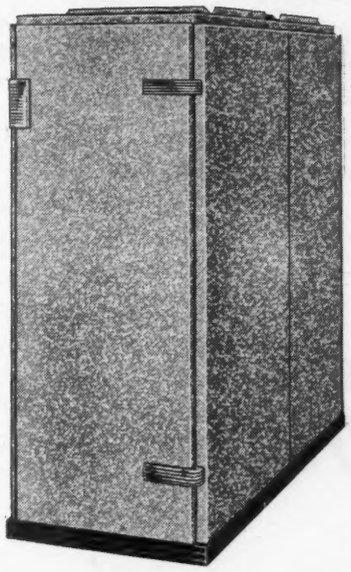
Series 8000
Oil-Fired, Steel Air Conditioning Unit



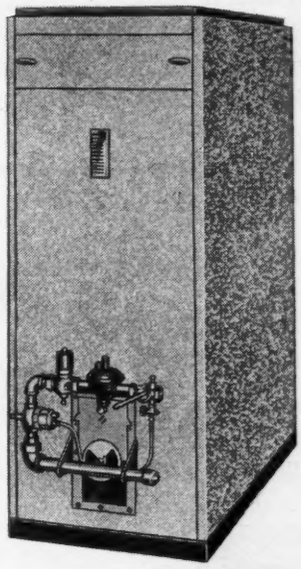
Series AC-700
Coal-Fired, Steel Air Conditioning Unit



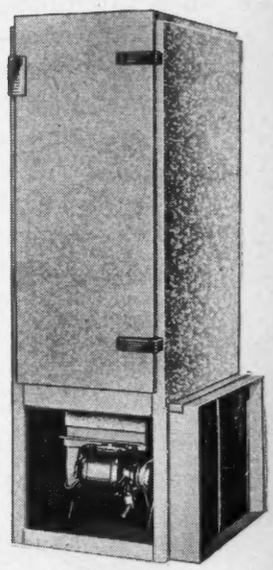
Series 700
Coal-Fired, Steel Gravity Furnace



Series L
Gas-Fired, Steel Air Conditioning Unit



Series W
Gas-Fired, Steel Gravity Furnace



Series U
Gas-Fired, Steel Utility Air Conditioning Unit

Easier to Install! Easier to Service! Easier to Sell!

★ Moncrief—again out in front—a Leader in Gas-Fired Heating and Air Conditioning Equipment.

The experience of many years in designing, experimenting and testing quality heating equipment is built into Moncrief's New 1946 line of Gas-Fired Equipment.

This 1946 line is entirely new from top to bottom—Smartly styled Cabinets—Heating Elements, Burners, and Blowers are "years ahead" in design and operating efficiency.

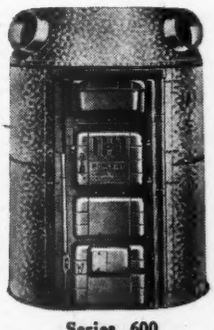
Moncrief units have successfully passed the exacting laboratory tests of the American Gas Association's latest requirements for Gas-Fired Heating Equipment.

High operating efficiency has been achieved in laboratory and actual home installation tests.

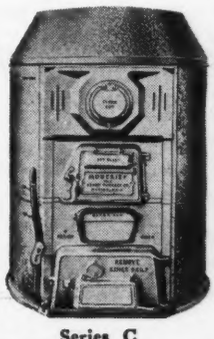
The NEW MONCRIEF line provides profit opportunity for the dealer. All units are easier to install—easier to service—they're more efficient—with longer life—and with unusual Sales-Appeal in their styling.

MONCRIEF—the complete line for Gas . . . Oil . . . Coal.

The Heating Line with Greater Profit Possibilities



Series 600
Coal-Fired, Steel Gravity Furnace



Series C
Coal-Fired, Cast Iron Gravity Furnace

MONCRIEF
SINCE 1895

THE HENRY FURNACE CO.
Medina, Ohio

New England OHI Plans Burner Show

PLANS FOR A BURNER SHOW at Boston the week of June 24, have been released by Fred N. Beckwith of Oil Heat Institute of New England, who will sponsor the show.

It is planned that booth space will be made available in the Statler Hotel for a four-day exhibition, and that attendance will be largely oilburner dealers from the area. The public will be encouraged to attend on the opening day.

A series of luncheons, meetings and dinners, concluding with the annual dinner on Thursday night, June 27, at which some prominent speakers will be featured.

Space will go on sale in the near future as soon as plans have been completed. The committee will make hotel rooms available for visitors to the show.

◈

Bulletin Reports on Economics of Insulation

STUDIES OF INSULATION at the University of Minnesota have been used in the compilation of data in a new booklet called "Economics of Insulation" by Frank B. Rowley and Richard C. Jordan. It has been issued by the Engineering Experiment Station as Bulletin No. 23, and sells for 40 cents.

Some of the findings reported in the volume are at variance with accepted ideas of the value of insulation and the dollars-and-cents savings that can be effected.

The booklet is amply illustrated with charts and tables which document the text, and confirm the findings.

◈

Socony Opens Burner Test Laboratory at N. Y.

SOCONY-VACUUM OIL Company has established an oilburner test laboratory at Brooklyn, N. Y., as a new unit of the company's Technical Service Laboratories. Said to be one of the most modern laboratories of its kind, the burner equipment includes a rotary vaporizing burner, a pot type vaporizing burner, and a pressure atomizing burner. Indicating and recording instruments make possible a study of every phase of burner operation with oils of varying specifications.

◈

Earl J. Smith retired December 31 after thirty-nine years continuous service with Underwriters Laboratories Inc., Chicago, as engineer of gases and oils. He came to the laboratories in 1906 from Armour Institute of Technology, where he had completed its course in fire protection engineering.

H. G. M. Fischer and *Edwin J. Gohr*, formerly manager and associate manager of divisions of the Esso Laboratories, have been appointed assistant managers of the Research and Development Department of Standard Oil Development Co., central technical organization for Standard Oil Co. (N. J.) affiliates.

Lt. Gen. James H. Doolittle, former commander of the 8th Air Force, has returned to Shell January 1, 1946, as vice-president of Shell Union Oil Corp., and he will be a nominee for the Board of Directors at the next stockholders' meeting, it was announced at the corporation's office recently. He will make his headquarters in New York, where his duties, in addition to general corporate responsibilities, will include coordination of the aviation interests of the Shell companies.

a Market made to Your Order

SILOO FUEL OIL TANK SOLVENT is the quick, positive and economical treatment for cleaning clogged pipe lines, oil strainers, oil filters and burners. **SILOO FUEL OIL TANK SOLVENT** is a product that sells itself because its national advertising gives you a ready-made market and assured profits.

And **SILOO FUEL OIL TANK SOLVENT** does more!—It keeps the entire fuel system free of sludge and gum, and eliminates the necessity of scouring and cleaning of storage tanks. **SILOO FUEL OIL TANK SOLVENT** is non-explosive, non-inflammable, non-corrosive and non-toxic. Write today for a dealer proposition.

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Dominion Square Bldg., Montreal

A Check List of Oilheating Information

1941-1942 SPECIFICATIONS BOOK OF OIL BURNERS AND FUELOIL

Gives specifications for 2200 models and makes of burners by 237 manufacturers. Gives grade of oil officially specified for each burner, method of atomization, air source, ignition data, oil feed, gph rating and motor size **50c**
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Nearly 100 text pages and 125 illustrations besides many tables and charts and short service hints. Bound in heavy paper. 8½" x 11". Covers trouble-shooting, field repair and efficiency testing to save oil. Valuable book for individual study or supplementary text for service schools. For all dealers, service and installation men. Many topics cover: fireboxes, draft, wiring, motors, controls, nozzles, pumps, baffles, efficiency, heating, etc. **$2.00**

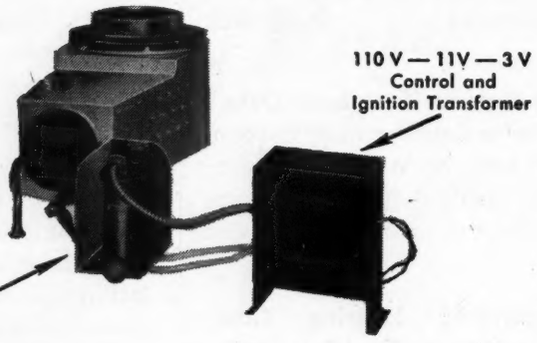
Because of the thousands of small orders we receive, we ask that cash, stamps, money orders or checks be sent with all orders. If you wish to order C.O.D., an extra charge of 10% is made to cover shipping and collection fees.

FUELOIL & OIL HEAT • **232 MADISON AVENUE NEW YORK CITY 16, N. Y.**

HERE'S THE 5th REASON WHY . . . . . YOU CAN MAKE MORE MONEY AS AN H. C. LITTLE DEALER

SEVEN H.C.Little BURNER SIZES MEET ANY DOMESTIC HEATING NEED

From 35,000 B.T.U. Input to 350,000 B.T.U. Input



From a dealer's standpoint, one of the important sales advantages of the H. C. Little conversion oil burner is the fact that its seven sizes meet any domestic heating need, as the following table demonstrates:

No.	Maximum Burner Input Oil/hr.	B.T.U./hr.	Burner Dimension Height	Width	Length
00	1qt.	35,000 btu	10"	6½"	14½"
0	2	70,000	10½	8	15
9	2½	87,500	10½	9¼	17⅝
1	3½	122,500	10	10	20¼
2	5	175,000	11	12	24¼
3	7	245,000	13	14	28¼
4	10	350,000	14	16	30

No other vaporizing oil burner, available in a complete range of sizes and factory assembled units, can offer you electric ignition and automotive operation, thermostatically controlled. No other oil burner offers so many applications. For these and seven other reasons, we again say, "You Can Make More Money as an H. C. Little Dealer".

(This is Advertisement #5 in a Series of Eight)

THESE ARE THE OTHER SEVEN REASONS

- Exclusive Burner Design
- Exclusive CI Electric Ignition
- 40% Quicker Burner Installation
- Absence of Service
- No Noise, Roar or Pulsation
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- Designed for the BIG Market of Small Homes.

WRITE FOR A COPY OF *"How to Get Real Profits in Postwar Heating" and learn ALL the reasons why you can make more money as an H. C. Little dealer.*

DEPT. 1
SAN RAFAEL
CALIF.

H. C. Little BURNER CO.

Factory Representatives in Principal Cities.

The Greatest Name in Low-Cost Automatic Oil Heat for Small Homes.

Everyday Snags

Sun-Heat Complications

LARGE SOUTH-SIDE AREAS, which we are told may be featured in some of the post-war homes, have been heralded as providing sun heat; when the sun shines on winter days, the rooms are heated at no fuel cost. There may be a small catch to this idea which seems to obtain something for nothing, however, for rooms with great glass areas are expensive to heat during the considerable number of winter hours when there is no sunshine. Some of the problems related to this were faced, in a small way, in a certain home to which was added a new south-side room. The new room was quite ordinary except that the owner wanted it to have two or three times the ordinary amount of window area. Also, he wanted it heated properly evenings, as well as during hours of sunshine.

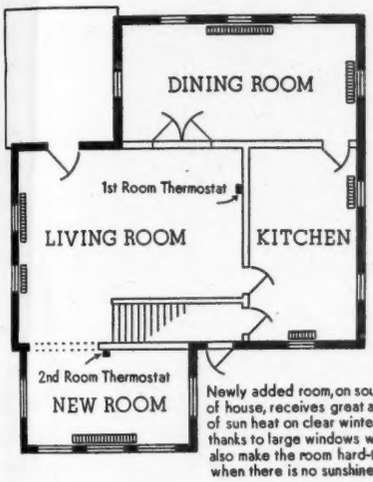
Originally, this house had a dining room, living room, and kitchen on the first floor; on the second floor it has two bedrooms and a bathroom. The dotted line in the drawing, across what is the large doorway to the new room, shows where the outside wall was before the room was added.

Heat Loss Increased

With unheated space under it, a "cold ceiling" over it, three outside walls, and five extra-large windows, this new room had oversize heat losses for its dimensions. To match the owner's demand that the room be as well heated on zero evenings as the living room, the heating engineer planned to install in it 95 sq. ft. of steam radiation. This was considerable load compared to the sum-total of all the other radiation in the house. True, there was 80 sq. ft. of radiation in the dining room, but this was turned off usually as the room seldom was used during the fuel shortage. The living room was heated well by only 50 sq. ft. of radiation, and the kitchen by 30, thanks to wall insulation and a full set of storm doors and storm windows. Upstairs, the bathroom had 18 sq. ft., one bedroom 27 sq. ft., and the other bedroom 40 sq. ft. Thus, the total radiation in use on the first floor, before the new room was added, was 80 sq. ft.; on the second floor, there was a total of 85 sq. ft. of radiation,

but much of the time the owner kept the bedroom radiators turned off and the bedroom doors closed to save oil.

The heating engineer reached the conclusion that, though the new room was not very large, to heat it and the rest of the house properly during normal times (with the dining room and bedroom radiators in regular use), a larger boiler would have to be installed. This was done. He emphasized to the home owner that the steady use of the

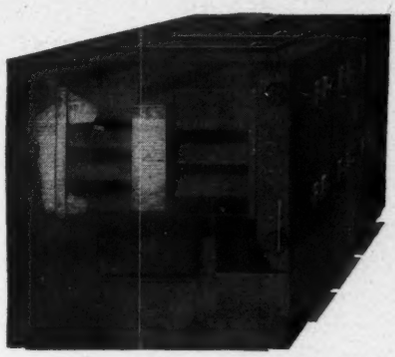


Newly added room, on south side of house, receives great amounts of sun heat on clear winter days—thanks to large windows which also make the room hard-to-heat when there is no sunshine

95 sq. ft. radiator in the new room (compared, for example, to the 50 sq. ft. of radiation in the living room, which provided most of the heat in the house for the oil shortage period), would increase the fuel consumption appreciably. Although asked to do so, the owner would not reduce the amount of glass area he planned for the new room. From reading about postwar homes, he had come to believe that south-side rooms with lots of glass in the outside walls would, somehow in the long run, be heated mainly by the sun. He stuck to this belief although he could understand that such construction made the use of a larger boiler necessary to carry the increased heating load that resulted, for example, on a windy zero day during the hours from sunset to sunrise.

The results of using the new room were carefully observed by the home owner and the engineer. To start out, the thermostat kept the living room at 68° as it always had (see 1st room thermostat in drawing). The 95 sq. ft. radiator heated the new room to 70° evenings, as the owner desired. Sunny days, the living room stayed at 68°, but sun heat plus radiator heat made the new room unbearably hot. The consumption of fuel oil

ECONOMICAL QUICK HEAT



Cutaway View of Double Series With 2 Rows of Generators

KOVEN WATERFILM SECTIONAL BOILER

That Can Be Taken Through a 2 Ft. Door

Engineers, architects and builders appreciate the saving made possible by the WATERFILM Sectional Series which can be taken through a 2 foot door thus eliminating expensive rigging and alteration costs. This steel boiler has been especially designed for use in apartment houses, industrial plants and other large buildings.

The smartly jacketed KOVEN WATERFILM line combines all the most modern improvements to give the utmost in economical heating comfort. These patented features of this fast steaming boiler give quick heat, even room temperature and a plentiful supply of domestic hot water. The WATERFILM BOILER is made in a variety of models suitable for every heating need. All models are constructed for use with oil, stoker or gas. More detailed information on the Sectional Series and other WATERFILM BOILERS may be had by writing to:

WATERFILM BOILERS, Inc.

154 OGDEN AVENUE, JERSEY CITY 7, N. J.

PLANTS: JERSEY CITY, N. J. • DOVER, N. J.

EVEN ROOM TEMPERATURE THROUGHOUT THE HOUSE

shot upwards, as the heating engineer had indicated it would, for a larger boiler was being used and every time the burner ran it heated the 95 sq.ft. radiator in the new room.

The installation of a system of individual room temperature control, or of zoned heat with the new room as one zone and the rest of the house as the other, was considered as one way out of the heating complications. Then, too, a thermostat could be installed in the new room to keep the radiator there cold when the room temperature became excessive. However, extensive use of controls did not seem to the owner to fit the pattern of the unpretentious home or the one-pipe steam plant used to heat it. He complained on many counts, all this while, but his discontentment over the size of the fuel bills was becoming more and more intense.

Finally, the heating engineer had a second room thermostat installed at the location shown in the drawing. Locked at 72° and wired in series with the first room thermostat, this keeps all the radiators cold when sun heat raises the temperature of the new room above 72° This arrangement is not ideal, for it causes the living room to become cold on sunny days in winter, as it keeps the oil burner idle for hours at a time even with the outside temperature in the twenties. But the fuel consumption is no longer about twice what it was before the new room was added to the house. In effect, the main part of the house is being underheated on sunny days, automatically, to make up in part for the extra fuel oil used to heat the new room when the sun is not shining. The owner's two main complaints have been ended now, anyhow, for his fuel expenses are lower, and the new room is not greatly overheated when the sun shines on winter days.

◈

Navy Drilling Test Well In Northern Alaska

EXPLORATION IN ONE of the most promising undeveloped oil areas of the world has been underway for some time, the Navy has revealed. Seabees are drilling a test well at Umiat on the Colville River, 182 airline miles southeast of Barrow, and 1,000 miles from the North Pole. Modern equipment was dragged in over the ice and drilling had reached 1816 feet when the weather stopped operations. All water needed for drilling has frozen solid and operations cannot be resumed until the weather moderates.

Four low pressure sands have been cut through at the present level, and it is expected that oil will be struck at between 3,000 and 5,000 feet. A 600-mile pipeline to Fairbanks is considered feasible if the oil is of expected quantity and quality.

Navy plans now call for completion of the exploratory phase of the program by the end of summer, 1949, at which time the eastern third of the reserve will be explored. Then the U. S. Geological Survey may take up exploratory work on the other two-thirds while the eastern third is put in operation.

◈

R. D. Ketner has been made manager of sales for General Electric's Industrial Heating Division, and R. M. Cherry is his assistant. O. S. Haskell is manager of the electric furnace and oven section, and K. E. Kjolseth of induction and dielectric.

For Remote Control of Air, Water, Gas, Light Oil, Refrigerants—any Voltage, A.C. or D.C.

A wide range of domestic and industrial applications, listed as standard by Underwriters' Lab. F.M. Extremely practical and simple in design. Packless construction. Positive control. Any voltage A.C. or D.C. No hum. Two wire, current failure. Coils removable while valve under pressure. Body high-grade brass forging. All internal parts bronze or stainless steel. Request literature.

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Industry Groups

Activities of local and national industry associations are reported monthly in this department. Secretaries are invited to send reports of their group's activities, to reach the editor by the 20th.

New York Oil Heating Assn. Elects Officers and Directors

AT ITS ANNUAL MEETING held December 10 at New York's Hotel Pennsylvania, the New York Oil Heating Assn. re-elected its president, Lawrence J. Murphy, of Murphy Coal & Oil Co., and its secretary, Anthony J. Sbare of A. J. Sbare Co. New officers elected for 1946 were: vice-president, Joseph Reiss, of Osher & Reiss, Inc., treasurer, Joseph Ross, Modern Utilities Engineering Co., and sergeant at arms, Edward G. Miller, of Quiet-Heet Oil Burner Co., Inc.

Twelve new directors were elected to serve three year terms: Albert G. Baerenklau, Baerenklau & Co., Inc., Philip Beyer, P. Beyer Heat & Power Co., Edward C. Bruns, Atlantic Tank Truck Co., Alan E. Burns, Burns Supply Co., Russell A. Dempsey, Dempsey Equipment Co., Philip Dietz, Dietz Automatic Heat, Inc., William Giffords, Giffords, Inc., David J. Hamilton, Geo. A. Hamilton, Inc., Lawrence Harvey, Sir Harvey, Inc., M. F. King, Robinson Clay Products Co., and the two officers, Murphy and Miller. The association also has 25 other directors with terms expiring in one and two years.

NWAHACA Announces Mid-Year Convention

THE NATIONAL WARM AIR heating and Air Conditioning Assn. has announced a mid-year convention to be held at Chicago's Edgewater Beach Hotel on June 25 and 26. On the day following, a golf tournament will be held.

At its December directors meeting, held in Cleveland, the Association's advertising, publicity and dealer training program, to spend one hundred thousand dollars in 1946, was approved, in addition to a sixty thousand dollar operating budget. The group now comprises 390 members—122 manufacturers, 53 jobbers and 214 dealers. New officers elected for

Get This New Book

BASIC SERVICE TEXT

for

Pressure Type Burners

by G. T. Kaufman, Technical Secretary,

OIL-HEAT INSTITUTE OF AMERICA, INC.

This manual has been prepared for basic training of installers and service men in residential oilheating. It is also a most useful reference source to both individuals who have completed the training course, and others who are engaged in, or have any interest in, oilburner work.

Chapter headings will show the inclusive coverage of the book.

Oilheating	Ignition Systems	Water Heating
Oilburner Installation	Controls, Two Wire	Combustion Chambers
Tanks and Piping	Controls, Three Wire	Chimneys, Draft
Pumps, Valves, Strainers	Boilers, Radiators	Testing Efficiency
Fans, Air Supply	Gravity Warm Air	Maintenance, Repairs
Atomizing Nozzles	Forced Warm Air	Service Procedure
Motors, Transformers	Heating Load	

Every service man can well use this book. Use the coupon to order today enough for your training and reference needs.

Price Two Dollars

Remittance with Order, Please.

Fueloil & Oil Heat Date .....
232 Madison Ave., New York 16, N. Y.
Please send us ..... copies of BASIC SERVICE TEXT at two dollars each. Remittance is enclosed.

Name .....

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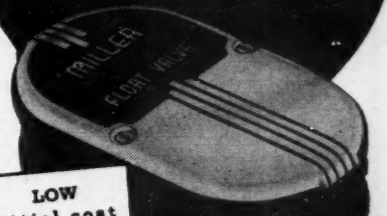
MILLER

OIL-HEAT CONTROLS

GUARANTEED
Precision-engineered for small homes.
For space heaters, furnaces, boilers, or hot-water heaters.



LOW initial cost and customer service cost

MILLER SAFETY
Constant Level Oil Control
VALVE

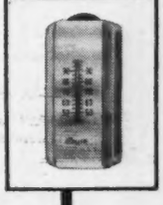
Automatic cut-off when oil gets too low. Automatic reset when anti-flood safety device goes into action. 100% foolproof oil control.

LIMIT CONTROLS

(electrical or mechanical operation) Three types available. Calibrated for warm air furnaces or steam or hot water boilers.

DRAFT REGULATOR

To fit 5", 7", 8" and 9" smoke pipes. Controls drafts at any determined setting.



THERMOSTAT

Positive acting. Small differential (less than 1°F) assures even temperature at all times.

Write or Wire for Full Details TODAY!

THE MILLER COMPANY
HEATING PRODUCTS DIVISION
MERIDEN, CONN.
Since 1844

Stainless steel spring and self-aligning stem

Complete nozzle assembly

Nozzle and adapter assembly

The Apthorp

"TRUE ALIGNMENT" OIL BURNER NOZZLE

The outstanding feature of this improved type of nozzle is its "TRUE ALIGNMENT" construction, which assures a perfectly balanced fire and the maximum atomization.

What is TRUE ALIGNMENT? It is a patented principle of construction that, by use of a sturdy stainless steel spring, forces the stem to find and *hold* a perfect taper-to-taper seat with the inside of the tip. Thus TRUE ALIGNMENT is obtained—and balanced fire guaranteed.

Scientifically designed and accurately machined, the APTHORP "TRUE ALIGNMENT" Oil Burning Nozzle is the product of the finest workmanship and manufacturing skill, your guarantee of satisfactory performance. Write for complete information.

Manufactured by

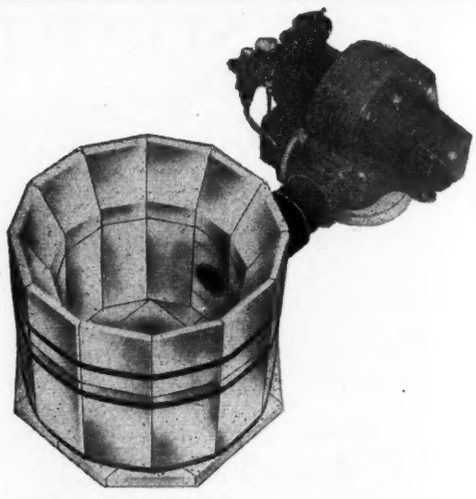
BOSTON MACHINE WORKS CO.

Oil Heating Supplies Division

7-17 WILLOW STREET, LYNN, MASS.

Presenting the INSTANT-GLO

Custom-Built Combustion Chamber



Our investigations in the combustion chamber field found that 90% of the cases of dissatisfaction were due to the improper sizing, design or materials used.

The Instant-Glo Combustion Chamber is the result of our experience for seven years with this type of chamber. It is scientifically correct, durable, and will give maximum efficiency when used with the proper size nozzle. Instant-Glo Combustion Chambers are made of special insulating brick, key stone cut to form a round, properly sized chamber for specified nozzle capacities.

Chamber #1—1.00 to 1.35 gals.
Chamber #2—1.50 to 1.75 gals.
Chamber #3—2.00

The outstanding advantages of INSTANT-GLO Combustion Chambers are:

1. A cherry-red hot refractory surface is instantly obtained as soon as the burner starts, resulting in immediate burning efficiency—high CO_2 readings.

2. No heat loss through the insulating brick into the base of heater.

3. Very quiet combustion is obtained because of the insulating qualities of the brick.

4. A properly sized round combustion area for square or round boilers, eliminating turbulent disturbances caused by square-cornered chambers.

5. The complete chamber is carefully packed in individual cartons and can be completely installed in less than one-half the time of an ordinary chamber.

WRITE FOR COMPLETE INFORMATION.

BOSTON MACHINE WORKS COMPANY

Oil Heating Supplies Division

7-17 WILLOW ST., LYNN, MASS.

DeLuxe Model 2A-300

Steel Handle . . . no tools required for speedy replacement of cartridge.

Extra large cartridge holds from two to four times more solids, waxes, gums, moisture and microscopic particles than most oil filters . . . designed especially for dirty tank installations and when superfine filtration and long cartridge life are desired.

Economy Model 1A-25

Single Bolt construction provides for quick replacement of cartridge.

For average burner not using heavier than No. 3 oil—especially suitable for vaporizing or pot type . . . ample size for full season—the rate and dirt capacities compare favorably with many filters which are much larger in size.

GENERAL FILTERS may be installed anywhere in the fuel line, either at the burner (preferable place) or at tank. Send for literature and complete information.

GENERAL FILTERS, Inc.

14435 Grand River Ave. Detroit 27, Mich.

EXHIBITORS ATTENTION!

Although offerings have been open only a very short time, already over 70 per cent* of space has been taken for

NATIONAL OIL HEAT EXPOSITION

April 23-27, 1946

Commercial Museum, Philadelphia

This is an OIL HEATING INDUSTRY Show

Eligible non-members are welcome to exhibit as well as members of

OIL-HEAT INSTITUTE OF AMERICA, SPONSORS OF THE EXPOSITION

They also are welcome to the *ANNUAL CONVENTION* of the Institute to be held at the same time as the Exposition.

This First Post-War Exposition will be a preview of a New Day in Oil Heat. It will be the largest ever held,

and

Philadelphia will see the greatest gathering of the Oil Heating Industry in History.

***As of January 9, 1946.**

For details write or wire

OIL-HEAT INSTITUTE of AMERICA

30 Rockefeller Plaza New York 20, N. Y.

C. F. Curtin, *Exposition Manager*

1946 are F. E. Mehrings, president, Atlee Wise, first vice-president, C. S. Franke, second vice-president, and Geo. Boeddener, managing director and treasurer.

The Association also announces a short course in practical warm air heating to be held at Syracuse University, Syracuse, New York, for three or four days starting April 15. In addition to professors in the school, several of the instructors will be industry men.

Mass. Oil Heating Assn. Addressed by Jack Scott

AT ITS CLOSING meeting of 1945, the Massachusetts Oil Heating Assn. on December 18 had as guest speaker John W. Scott, president of Buckley & Scott Utilities, Inc., who discussed the prospects and problems of oilheating in New England for the coming year. Scott is listed as a "pioneer," having installed the first automatic oilburner in New England at Providence in 1920.

ICHAM Meets

INSTITUTE OF COOKING AND HEATING Appliance Manufacturers held its Thirteenth Annual Convention and Exhibit at Cincinnati, December 3 to 5.

Sheldon Coleman, chairman, presided at the meeting of the Oil Division which heard reports on the supply situation on float valves, steel, cast iron. CPA estimates of time lags on materials and equipment was discussed, as well as OPA's cost absorption policies.

D. F. Jones reported for his Technical Committee and E. A. Vallee for the Publicity Committee.

Following the meeting of the Division, J. C. Hemingway presided over a meeting of the Oil Floor Furnace Section.

Birmingham to Succeed Scott, Heading New Eng. Oil Group

JOHN W. SCOTT, president of Buckley & Scott Utilities, Inc., is slated to retire from the presidency of the Independent Oil Men's Assn. of New England at its January 10 meeting, after heading the group for five years. His successor, according to recommendations of the nominating committee, will be John Birmingham, youthful president of White Fuel Corp. Other officers and directors will be listed after the annual meeting, in the February issue.

I-B-R Plans More Installation Guides

MEMBERS OF THE INSTITUTE of Boiler and Radiator Manufacturers completed plans for four more guides to the installation of radiator heating system at their recent annual meeting at Absecon, N. J. Publication of two new guides was authorized and plans for two more were approved.

Guide No. 1, entitled "I-B-R Installation Guide No. 1," describes the simplest method for designing and installing a one-pipe forced circulation hot water heating system.

Guide No. 2 will offer suggestions on the installation of a one-pipe steam system while Guide No. 3 will cover the selection and installation of water heaters. The printing of Guides Nos. 2 and 3 will be completed about March 1.

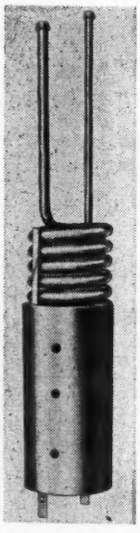
Guides Nos. 4 and 5 will provide the

NOW! Preheat Oil In Bulk Storage...

LOWER GRADE OILS FLOW FREELY

HAVE GREATER B.T.U. VALUE WITH

REMPE "HOT-SPOT" PREHEATER



A new tested method of bulk tank preheating is now made available with the Rempe "Hot Spot" Preheater. This is a shell and coil assembly which is placed in the storage tank. Suction, inlet and outlet heating pipes go through the manhole cover.

Preheating is assured by specially designed flow accumulator which causes liquids to flow over heating coils before entering the suction line.

ALL STEEL CONSTRUCTION

Coil—1½" standard steel pipe. Shell—12 gauge sheet steel 16" O.D. Accumulator—steel bolted in place. Tested under 400 lbs. air pressure. Inlet and outlet pipes and connections furnished to meet requirements of each installation.

Write today for details and prices.

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At-A-Glance Gauges Are PREFERRED By The Oil Industry because

Write for Complete Details Today.

To assure accuracy AT-A-GLANCE Gauges are NON-ADJUSTABLE, but are accurately adjusted at the factory to fit all sizes of fuel oil storage tanks according to individual specifications. AT-A-GLANCE Gauges are also available for any special sized tanks.

AT-A-GLANCE Gauges are approved as standard by the UNDERWRITERS LABORATORIES.

AT-A-GLANCE Gauges are the easiest reading gauge on the market. That red indicator disc can be seen from any direction and at a great distance.

AT-A-GLANCE Gauges can't be beat for dependability and long life. They contain no gears, magnets, springs nor intricate mechanism to wear out or to get out of adjustment.

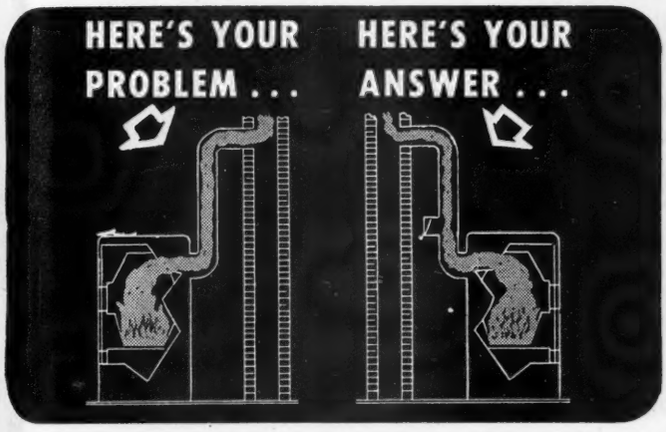
AT-A-GLANCE Gauges can be purchased from jobbers throughout the United States and Canada.

KRUEGER SENTRY GAUGE CO.
1056 WEST MASON ST. GREEN BAY, WISC

Fuel-Saving Starts With CONTROL

Field

BAROMETRIC DRAFT CONTROL



Excessive, uncontrolled drafts draw heat up chimney; waste 5% to 25% of fuel. Manual damper cannot control this waste.

The Field Draft Control holds draft to a minimum; saves 5% to 25% of fuel. Easily installed; profitable to handle.

Write today for full information.

FIELD CONTROL DIVISION MENDOTA, ILLINOIS

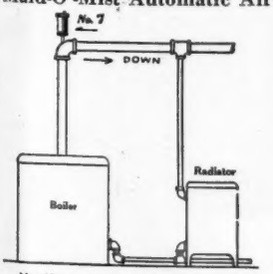
DIVISION H. D. Conkey & Co.

And Keep It Out With

AUTO-VENT AIR ELIMINATORS

CIRCULATION TROUBLES?

Don't fight air pockets or traps in hot or cold circulating lines! "Get that air out of there" *and keep it out* simply by installing the No. 7 Maid-O'-Mist Automatic Air Vent. This reliable air vent has a self-closing float-controlled valve and is designed especially for circulating pipe lines, convector radiators, unit heaters, cooling manifolds, tanks, diesel engines, or any other application where air pockets or traps retard the free circulation of liquids. For pressures up to 75 lbs. Bright brass finish.



Venting overhead hot or cold water circulating lines.

PLAY SAFE—USE THEM ON EVERY JOB

MAID-O'-MIST INC.
3221 NORTH PULASKI ROAD
CHICAGO 41 ILLINOIS

AUTOMATIC HUMIDIFIERS FOR ALL TYPES OF HEATING SYSTEMS

CATSKILL

spells profits

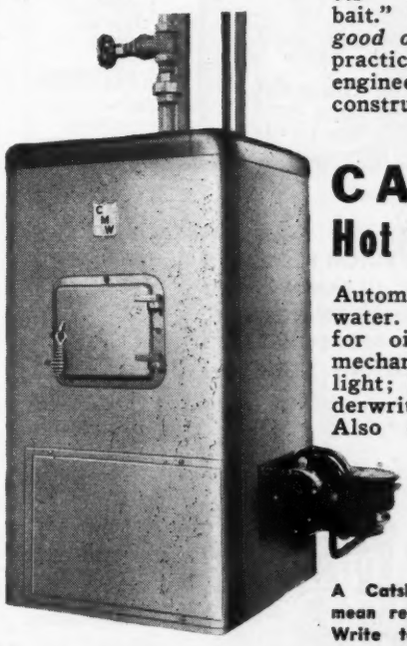
WITH THESE 2 GREAT

OIL HEAT UNITS

CATSKILL Oil Burner

Catskill CMW dealerships still open in many localities. Write for our proposition.

For the BIG conversion market. A low-cost unit for changing-over still serviceable heating plants to oil heat. No meaningless "gadgets" featured as "sales bait." Offered as *just a real good oil burner,* combining practical design, precision engineering, highest grade construction throughout.



CATSKILL Hot Water Maker

Automatic — instant hot water. Specially designed for oil fuel. Air-induced mechanical draft; easy to light; low pilot flame; Underwriters' approval seal. Also excellent as garage heater or heat booster for small shops.

IMMEDIATE DELIVERY ON HOT WATER MAKER

A Catskill CMW franchise can mean real profits for you in '46. Write today for full details of our exclusive dealer plan.

C M W

CATSKILL METAL WORKS, Inc.
CATSKILL, NEW YORK
ONE OF THE LARGEST PRODUCERS OF ANTHRACITE STOKERS

latest data on the installation of a two-pipe reverse return gravity hot water system and radiant heating.

Material in all guides is based on the I-B-R Research Program at the University of Illinois which is now in its fifth year. This program centers around the I-B-R Research Home which has been described as the most completely equipped house in the world for the study of heating equipment under actual operating conditions.

A. E. Bastedo, vice president of the Burnham Boiler Corporation, chairman of the Institute of Boiler and Radiator Manufacturers, was re-elected chairman of the Institute.

◈

Wisconsin Group Starts Billboard Advertising

TEN BILLBOARDS HAVE BEEN secured by the Wisconsin Oil-Heat Association at good Milwaukee locations for 30-day showings during January, March and again in the fall. Members who wish to order boards for a showing with their own imprint may do so through the association. Copy urges the public to "Enjoy Clean, Economical Oil Heat," and the association's boards will carry the advice to "Place Your Order Now," in the bottom of the panel where individual imprints will be placed by private exhibitors.

The March showing is designed to put the industry before the public in Milwaukee at the time of the local Home Show.

Nebraska Oil Jobbers Hold Annual Convention

NEBRASKA PETROLEUM MARKETERS, INC., held its annual convention at Omaha's Hotel Fontanelle December 4 and 5. Featured speakers were Rufus N. Howard, director, Department of Agriculture and Inspection, Clay Wright, Chief, Division of Motor Fuels, John A. Ainley, secretary, Nebraska Petroleum Industries Committee, Howard A. Lappe, the Ethyl Corp., Warren C. Platt, National Petroleum News, Les Allman, Fruehauf Trailer Co., W. A. Matheson, Williams Oil-O-Matic, Paul Williams, Western Petroleum Refiners Assn., and Robert E. Allen, American Petroleum Institute.

Officers elected for 1946 were O. J. Shaw, president; Karl Swanson, first vice-president, Don W. Clarke, second vice-president, and H. H. Hahn, who continues as secretary and managing director.

◈

H. A. Malcom, formerly assistant general sales manager of the Airtemp Div. of Chrysler Corp., has been appointed general sales manager. *J. J. Donovan* eastern divisional manager succeeds Malcom as assistant general sales manager. Malcom joined Airtemp in 1941, after wide experience in the distribution of automobiles and refrigerators. Donovan formerly with General Electric Co. has been for many years active in the distribution of heating and air conditioning equipment.

Still the choice of leading boiler manufacturers and heating men after 20 years' nationwide service.

For sale by all wholesalers of plumbing and heating supplies. *Ask For Folder "K."*

THE VINCO CO., Inc.

305 E. 45 Street, New York 17, N. Y.

NOW . . . Western manufacturing and distribution facilities for Balloffet Nozzles by

DELAVAN ENGINEERING CO.
3009 Sixth Ave. - Des Moines 14, Iowa

BALLOFFET DIES AND NOZZLE CO., INC.
6825 ADAMS STREET GUTTENBERG N. J.

Right before your eyes!

CO_2

Combustion Check-up

DRAFT GAUGE

STACK THERMOMETER

FIRE EFFICIENCY FINDER

The FYRITE Combustion Test Set gives you everything you need to detect furnace conditions that waste fuel. The FYRITE CO_2 Indicator quickly shows whether the fuel receives the proper amount of air. The Stack Thermometer test shows how well the furnace absorbs the heat of the fuel burned. The unique Fire Efficiency Finder correlates CO_2 and stack temperature readings to show at a glance loss due to heat carried away in the flue gases. The DRAFT-RITE Gauge is indispensable for properly adjusting the draft.

These instruments are designed especially for the heating man's service kit. They are easy to operate, sturdy, durable, lastingly accurate. Use them now—to point the way to necessary repairs and adjustments that secure efficient fuel utilization ... and to build an ever-widening reputation for reliable, expert service.

HEATING SERVICE DIVISION

BACHARACH INDUSTRIAL INSTRUMENT CO.

7000 BENNETT STREET • PITTSBURGH 8, PA.

8 OUT OF 10 NEW HOME OWNERS SAY...

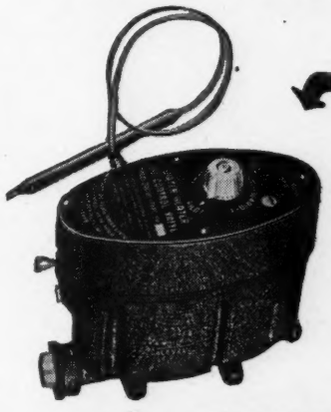
"We Want Economical Automatic Heat"

Vaporizing Oil Burner Space Heaters, Floor Furnaces, Furnaces, and Water Heaters Equipped with "A-P" CONSTANT LEVEL OIL CONTROLS Deliver This Great Market Right to Your Doorstep

The immediate future is bright for vastly increased installations of Vaporizing Oil Burner Appliances in the millions of attractive new small homes that will shortly be under construction.

The majority of these prospective owners plan to enjoy the comfort of automatic heat and the luxury of automatic hot water — economically and dependably assured by "A-P" Constant Level Oil Controls.

Prepare to promote profitable Vaporizing Oil Burner Appliances sales the "A-P" way — aided by the great advantage of assured leadership with "A-P" Constant Level Oil Controls. Complete Bulletins upon request.



Illustrated is the "A-P" Model 240 W Y P Constant Level Oil Control for water heaters—equipped with "Magic Pilot." The "Magic Pilot" also is available on other model controls for vaporizing burner floor furnaces and furnaces, where a low pilot flame must be maintained indefinitely.

AUTOMATIC PRODUCTS COMPANY

2458 N. 32nd ST., MILWAUKEE 10, WIS.

DEPENDABLE OIL CONTROLS

"A-P" CONTROLS ARE DESIGNED TO ELIMINATE SERVICING

Reader's Problems

Q. A piston type steam-driven oil pump takes steam from the boiler at 150 lbs. pressure and delivers heavy fueloil to oil burner nozzles at 150 lbs. pressure. In the same boiler room there is a 5 hp electric motor driven oil pump, which can be used for giving oil to the nozzles at the right pressure. Is it more economical to use the steam-driven fueloil pump or the electrically driven pump?

F. M., *Detroit.*

A. A careful analysis of many items in the power plant would be needed, together with calculations, to arrive at an exact and dependable answer to your problem. We don't have data, for example, on the sum-total cost of each thousand pounds of steam from the boilers, the cost of electricity, or the amounts of steam and electricity used hourly by each of the oil pumps.

In general, however, it costs less to use the steam-driven pump when all of the exhaust steam from the pump is used and none escapes to atmosphere. In a certain plant, for example, operating the steam-driven pump saved half the cost of operating the electric pump, because arrangements were made to use all of the exhaust steam from the oil pump for heating boiler feed water and heating large hot water storage tanks. At times of heavy heating loads in winter, when the oil pump worked hard, exhaust steam from it also was used in low-pressure steam radiation which heated two buildings near the power plant. Of course, all the equipment which uses exhaust steam in this plant is arranged to use live steam from the boilers, at properly reduced pressure, when there is insufficient exhaust steam to carry the loads of this equipment.

Also in general, it costs much less to use the electrically driven oil pump when none of the exhaust steam from the steam-driven pump can be put to use. With all the exhaust steam from the steam-driven pump wasted skwards, in the plant mentioned above, it would cost about eight times as much to pump oil by steam as to pump it by electricity.

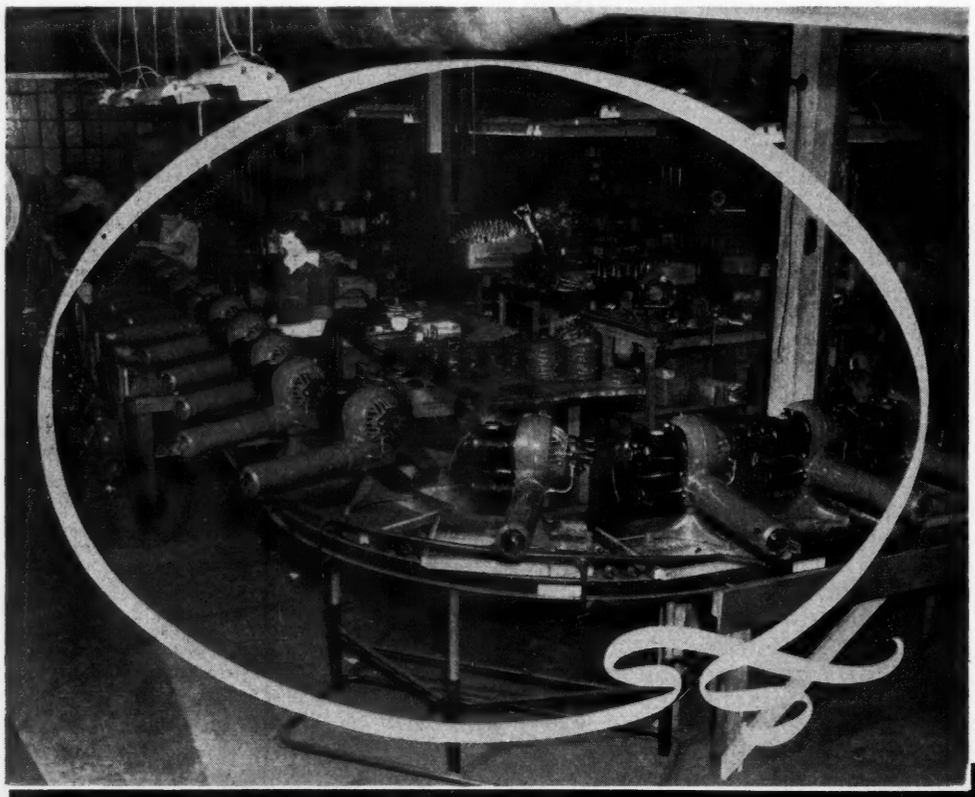
The general answer to your question is, then: To arrive at minimum costs for pumping the oil, use the steam-driven pump, but make certain that none of the exhaust steam from the pump escapes unused. If you don't use the exhaust steam for heating boiler feed water, use it for something else.

◈

Kewanee Catalog 96

KEWANEE BOILER Corp., Kewanee, Ill., has released Catalog 96 "E" on Fire Box boilers for Hi-Pressure Steam. The 20-page, 4-color book is punched for binding.

Color illustrations accompany the text description and specifications of the 500 and 400 updraft boilers and the 300 downdraft series for hand or mechanical firing.



SMOOTH

Rolling Assembly

LINES

To provide a better delivery and uniform quality, Nu-Way Oil Burners are assembled on conveyor lines.

Since 1921 Nu-Way has produced oil heating units of high quality that have rendered remarkable heating service records.

When you handle Nu-Way Oil Burners, you are assured of the best in workmanship, materials, and delivery.

The Nu-Way Corporation

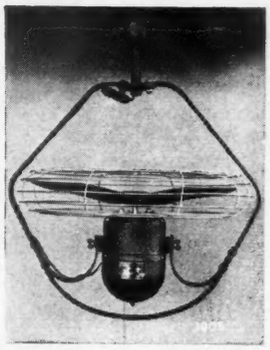
Quality Oil Burners Since 1921, Rock Island, Illinois

A LIVE SALES ITEM
FOR FUEL OIL DISTRIBUTORS

THE *Reco*

RADI-AIRE

HEAT CIRCULATOR FAN



WILL PLEASE YOUR CUSTOMERS

If any of your customers have trouble keeping warm because of overhead radiators or ducts; because rooms are subjected to strong outside breezes; or because of high ceilings, this fan when operated at slow speed, will make them happy. It prevents wall streaking and air stratification. It keeps floors warm.

Hot air rises and the temperature at the ceiling may be 80° F. when it's only 60° F. at the floor.

The RECO blows upwards, the air traveling along the ceiling and down the walls at slow speed carrying the super-hot and moist air with it, causing uniform temperature and humidity in every part of the room, without noise and without draft. It dissipates smoke and odors. Made in various sizes and types. Write today for special distributors' proposition:

Established 1900

REYNOLDS ELECTRIC COMPANY

2687 W. CONGRESS STREET CHICAGO 12, ILLINOIS

Underwriter approved

STACO

Domestic Fuel Oil Tanks

Staco Tank Features: Double dished style heads; embossed and pierced for spud openings; fitted for pipe legs. 275 gals. Write for earliest delivery date.

STATE TANK CO.

670 STATE STREET, NEW HAVEN 6, CONN.

THREE Combustion Chambers IN ONE

Now you can fit any make or style of burner—from 1 to 1.65 gals. of oil per hour—with a *single* R & I Combustion Chamber.

It comes in 8 pieces, with bonding clips for holding the section together without cement. From these pieces you can quickly make a round, rectangular or pear-shaped chamber.

If you need a chamber for larger jobs, we can supply extension pieces.

In every package there is enough Hearth Material to make a 1½" thick floor and to fill between tube of burner and the chamber itself. So you have everything complete—nothing more to buy.

R&I

No cutting or fitting is needed. Order from your supply house. Write us for Bulletin OB-95.

REFRACTORY & INSULATION CORPORATION

120 Wall Street, New York 5, N. Y.

Chicago 4, Ill. · Detroit 26, Mich. · Philadelphia 3, Pa. · Newark 2, N. J.

R & I Combustion Chamber

Manufacturers Activities

Sigwald Buys Progressive

SIGWALD ENGINEERING Corp., Minneapolis, has purchased the entire assets of the Progressive Oil Burner Co., also of Minneapolis, and will continue to produce the Progressive line of equipment at the Sigwald plant, in addition to the usual Sigwald line. Sigwald burners and some models of Progressive now are being manufactured. Production is limited by the shortage of parts, according to A. H. Coffin. This purchase brings together two of the oldest manufacturers of oilheating equipment in the area.

Nat. Rad. Expands Plant

PLANT ADDITIONS to its New Castle, Pa., properties will enable National Radiator Company to meet growing demands for industrial castings and heating equipment, according to Robert S. Waters, President. The new $235,000 addition will provide facilities for another mechanical moulding unit within the 11,000 sq. ft. of floor space to be built. Officials say the larger plant will provide jobs for 200 more employees.

Richmond Moves Office

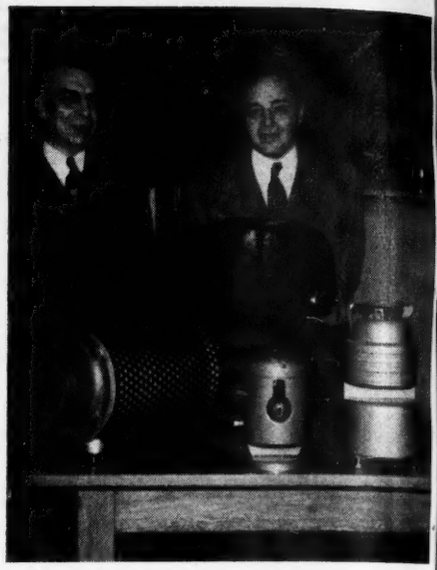
GENERAL SALES OFFICES of the Richmond Radiator Company have been moved to the Reynolds Metals Building, 19 East 47th Street, New York City, it is announced.

Timken Celebrates Its Twentieth Year in Oilheating

MARKING TWENTY YEARS in the oilburner business, Walter F. Rockwell, president and T. A. Crawford, general manager, showed the postwar Timken Silent Automatic burner and contrasted it with the Timken "Arrow" which was being sold twenty years ago.

The "Arrow" burner had 480 moving parts, according to officials, weighed 320 pounds, and retailed at $625. The new line is streamlined, has only one moving part and sells for about half the price of the Arrow.

Plans for the production of other Timken Silent Automatic products in greatly expanded manufacturing facilities are well under way, according to President Rockwell.



Timken officials, *W. F. Rockwell (right) and T. A. Crawford, show the old and the new.*

Plan Burner Production

MT. HAWLEY MFG. CO., Mt. Hawley Airport, Peoria, Ill., is planning production

MANNING AND LEWIS
FUEL OIL PREHEATERS
Delivery From Stock For
- Below Water Line Service
- Low Pressure Steam Service
- High Pressure Steam Operation

Ask For Bulletin No. 740
MANNING AND LEWIS
28-42 OGDEN ST. NEWARK 4, N. J.

HAYWARD OIL BURNERS
ROTARY and PRESSURE ATOMIZING TYPES
Dealer and Distributor Inquiries Invited.
HAYWARD MFG. CO., INC.
505 COURT STREET BROOKLYN 31, N. Y.

* PACKAGED HEAT
* A complete line of 100% prefabricated automatic gas or oil-fired domestic heating equipment.
- Winter Air Conditioners
- Split System Units
- Boiler Burner Units
- Penngun Water Heaters

PENN BOILER & BURNER Mfg. Corp.
Lancaster, Pennsylvania

FUEL OIL TANKS
UNDERWRITERS APPROVAL
ALL SIZES • FOR ALL PURPOSES
PRE-CAST COMBUSTION CHAMBERS
Precision made from "B & W" Refractory Mix
Amerform FILL-AND-VENT BOXES
IMMEDIATE DELIVERY • LARGE CAPACITY • DISCOUNTS ON REQUEST
COMMONWEALTH PRODUCTS CO. Manufacturers and Distributors
Main Offices, REAL ESTATE TRUST BLDG., PHILA. 7, PA.
Phone: PENnypacker 7549

Heart-Beat of the Burner's Oil Flow

TEESDALE T. U. X.

Fully Automatic
OIL PUMP

- *Self-Priming*
- *Vapor and Oil Tight*
- *Silent and Leak-Proof*
- *Parts Interchangeable*
- *Capacity 30 Gallons per hour*

DEALER FRANCHISES NOW AVAILABLE —

TEESDALE MANUFACTURING COMPANY

Producers of the Famous Teesdale Oil Pumps and Accessories

427 MARKET AVENUE
GRAND RAPIDS 3, MICHIGAN

PRECISION **Starco** COMPOUNDS

NOW OFFERING

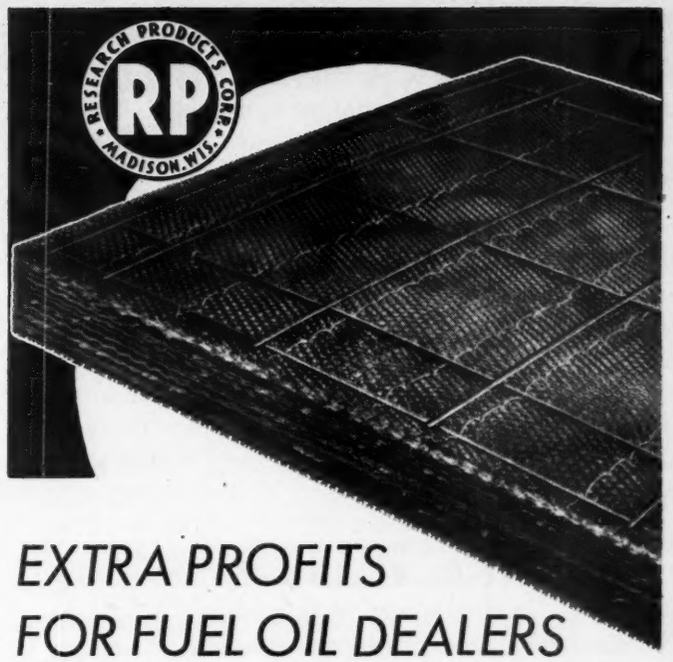
GREASMASTER "66"

"THE SERVICEMAN'S FRIEND"

IN THE NEW HANDY DIPPING PAIL—

Cleans
STRAINERS • NOZZLES • PARTS
Strips
BURNERS PUMPS ENTIRE UNITS
Saves
TIME and PARTS

CAPACITY
2 GAL. PAIL—(1¾ GALS. AND BASKET)
AN ECONOMICAL "MUST" FOR SERVICE WORK
AT YOUR FAVORITE JOBBER
A PRODUCT OF
STEWART-HALL CHEMICAL CORPORATION
MOUNT VERNON, NEW YORK
DISTRIBUTOR ACCOUNTS INVITED FOR DESIGNATED AREAS.



EXTRA PROFITS FOR FUEL OIL DEALERS . . . feature efficient

RESEARCH AIR FILTERS

for forced warm air furnaces

Fuel oil dealers are having their men check air filters when making oil deliveries. Changing to new RESEARCH AIR FILTERS is a simple, 5 minute job—and mighty profitable. Write for details.

Nationally Advertised

in Better Homes and Gardens and American Home

FREE SELLING AIDS are yours for the asking — window and counter display materials, mats, etc. Also free catalog (at right) of air filter sizes for leading makes of furnaces and air conditioners.

Order From Your Wholesaler!

RESEARCH PRODUCTS CORP.
MADISON 3, WIS.

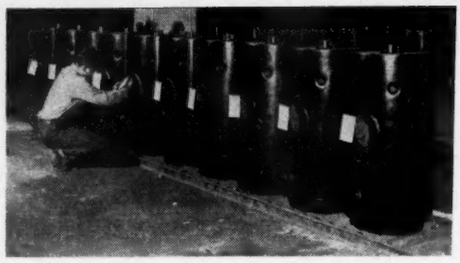
of a line of high pressure oilburners. Heading the concern is W. A. Hale, president, and M. H. Braden, manager, both of whom formerly were with the Aldrich Co., Wyoming, Ill.

Ilg Holds Meeting

ILG ELECTRIC Ventilating Co., Chicago, recently held a meeting for representatives of 19 eastern branches at New York to discuss markets, products and new selling plans. P. D. Briggs, vice-president and general sales manager presided at the two-day conference. A new sales portfolio was presented.

G-E Starts Production Of Oilfired Boiler Units

AFTER AN INTERRUPTION of normal peacetime production for more than three and a half years, the first group of boilers for oil-fired automatic home heating were turned out early in December at the General Electric Company's Air Conditioning Department plant in Bloomfield, N. J., and were shipped to distributors throughout the country. The last boiler for domestic heating was produced on April 30, 1942. After that date the entire department's efforts were turned to war production.



G.E. Production Line *yields first burners since 1942.*

Even as the final welding, testing, and painting operations were carried out on this first group of boilers, workmen and electricians were installing conveyor equipment and electrical circuits as a part of the reconversion program which is still being carried on throughout the plant. The area in which the manufacture of these boilers is now being done was formerly the site of production on vital parts of the B-29 gun fire control and interrupter system.

Harvey Gives Party

SID HARVEY, Inc., Valley Stream, N. Y., gave its annual Christmas party for employees and friends on December 17. Dinner and refreshments were served to 156, after which some of the sixteen returned veteran employees told many of their experiences.

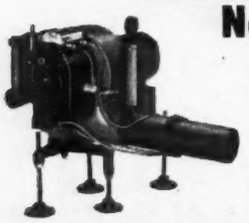
Sid W. Harvey presided at the dinner and acted as toastmaster. Speakers included Lawrence Harvey, vice-president, Walter L. Bernard of Sid Harvey, Inc., of Pa., and William Archer, sales manager.

Employees had fun with the boss by presenting him with a watch, packaged in a wooden packing case and fourteen smaller complete packages. The gift was presented complete with nail puller and knife, both of which Mr. Harvey recognized as property of the receiving department.

Delco Graduates Twelfth Factory Service Class

STUDENTS of the twelfth factory class in service and installation of Delco-Heat have just been graduated by Delco Appliance Div., Rochester, N. Y., it is announced by K. O. Wolcott, service manager. Delco-Heat distributor and dealer organizations in 26 states have now taken

★ RAYFIELD AUTOMATIC ★



No. 5 OIL BURNERS

REDUCE HEATING COSTS... INCREASE YOUR PROFITS

Burn No. 5 heavy fuel oil. Self contained, all electric. Self-lubricating. Many new exclusive features. Write for full details

GOOD TERRITORIES OPEN

C. L. RAYFIELD CO.
2010-18 S. Halsted St., Chicago 8, Ill.

The leader in

WATER LEVEL CONTROLS

for design and style

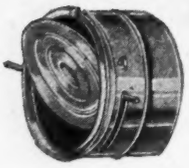
has always been

Newark Controls

Bloomfield New Jersey

PREFERRED

DRAFT-A-JUSTOR



The Original. Still the Best. Hundreds of Thousands in Use. • Holds the draft constant in the fire box. • Scientific draft control for the smallest to the largest jobs. • Stove, domestic, and commercial sizes from 4" to 24" in diameter. • Industrial sizes from 24" x 24" to 5' x 12'.

Write for literature and trade price

PREFERRED UTILITIES Mfg. Corp.
1860 Broadway, New York 23, N. Y. Boston Office: 839 Beacon St.

Rajah

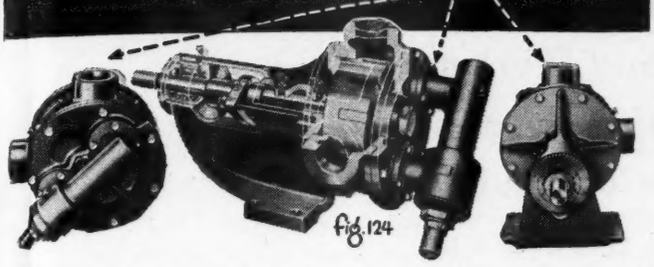
HAND CRIMPING TOOL

IT CUTS AND STRIPS AND ALSO CRIMPS

Rajah Terminals to ignition cable without the use of solder or any other tools

The RAJAH COMPANY, Bloomfield, N. J.

No Matter How You LOOK At It...



VIKINGS ARE 'TOPS' IN THE ROTARY PUMP FIELD

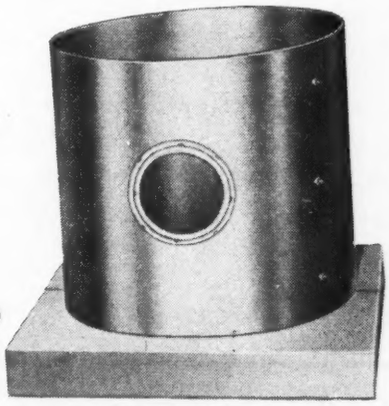
Viking Rotary Pumps outsell all others because Vikings are simple in design and ruggedly constructed to provide dependable, carefree service.

Write today for Bulletin Series 3000TT which illustrates and describes Viking Rotary Pumps widely used in the fuel oil and heating industry.

VIKING Pump COMPANY
CEDAR FALLS, IOWA

PEMCO STAINLESS STEEL ADJUSTABLE FIRE BOX

3 in 1



Adjustable to fire

1:00 to 1:25
1:35 to 1:65
1:75 to 2:25

$9.00 *to the trade*

Made in U.S.A.—Reg. U. S. Pat. Off. No. 2341622
Satisfaction guaranteed.

For technical bulletin or orders, write your nearest DISTRIBUTOR.

CONNECTICUT
A B C Exchange, 224 Bassett Street, New Haven.
NEW YORK
Vin's Supplies, 3612 E. Tremont Ave., New York City.
Northrup Supply Corp., Binghamton—Ilion—Oneonta.
J. S. Carpenter, 250 St. Paul St., Rochester.
RHODE ISLAND
Universal Supply Co., 136 W. Exchange St., Providence.
WISCONSIN
W. A. Roosevelt Co., S. E. Corner Front & Vine Sts., LaCrosse.
MINNESOTA
Roberts-Hamilton Co., 701-715 So. Third St., Minneapolis.

PEMCO
P. O. Box 1499, New Haven, Conn.

DISTRIBUTORS-

This may be the product you're looking for!

THERMOSEAL Combination Screen and Storm Sash combines all the advantages of screen, storm-sash and weather stripping in one compact unit. The patented, all-metal, adjustable closure frame simplifies installation, adjusts to shrinkage and expansion, eliminates seasonal fitting and provides a permanent weather seal.

The Thermoseal Three-In-One Window Insulation has a ready market. Mr. and Mrs. America are more storm sash conscious than ever before. The wartime fuel situation made conservation a strong habit.

The result is ever-increasing demand for Thermoseal Three-In-One Window Insulation. Thermoseal has already acquired national distribution and public acceptance.

AN ESTABLISHED SALES APPEAL

Thermoseal Three-In-One Windows have a sales story that really sells—greater comfort, convenience and economy (fuel savings usually pay for the windows in a few seasons) . . . rainproof, draft-free ventilation . . . only seconds to change from screens to storm sash, all from inside the house. There's nothing like Thermoseal Windows on the market. Contain many patented features. Average installations run between $200 and $300, with an attractive profit margin and very little seasonal variation in sales. Big seller in low-cost homes.

Inquiries are pouring in and demand for this product is booming. We have expanded production and are planning further expansion to take care of this huge market.

DISTRIBUTORS INVITED

A limited number of good territories are now available. If you want to obtain a valuable franchise with a live, aggressive organization marketing a fast-selling product, write today for information.

THE THERMOSEAL COMPANY
1836-B EUCLID AVENUE CLEVELAND, OHIO

Highest Quality joined with
Accuracy and Workmanship---
Responsibility gives you great
Satisfaction and fullest
Confidence toward our
HARSCH Nozzles!

H. HARSCH & CO., INC., 230 TUSCAN ROAD, MAPLEWOOD, N. J.

advantage of this factory training program.

Delco finds that this kind of schooling not only gives new men the fundamentals, but keeps experienced Delco-Heat sales and service personnel up to date on new developments.

Control Study *at the twelfth factory service class held by Delco at Rochester.*

The Delco service school bell was silent during the war, but started clanging again for the first time on June 7. Since then the program has been growing steadily.

The factory school offers a 2-week course. About one-quarter of the enrollee's time is spent learning how Delco-Heat equipment operates, and how it should be installed, adjusted and serviced. The rest of the time he puts his knowledge into practice, working with actual models, under the eye of factory specialists.

Along with experience in adjusting and repairing Delco-Heat equipment, the service personnel get scientific instruction on all phases of installation, making comfort surveys, choosing the best type of system to meet particular requirements, and figuring heat loss. They are introduced to the newest methods of testing for efficient heating and for cutting down fuel waste.

While factory service schools are the mainstay of its national dealer training program, field schools also are being held at key distributor points.

These field schools, being of shorter duration, are not so extensive as the factory schools, but include much of the same material and the same type of expert instruction as the courses at the factory.

Other dealers and distributors will be visited as soon as practicable by the Delco-Heat Service Trainer, a mobile "School on Wheels" or rolling laboratory, complete with testing equipment, work benches and demonstration units.

Westinghouse Builds New Buffalo Motor Plant

A NEW MOTOR PLANT has been opened by Westinghouse Electric Corp. at Buffalo, N. Y., to produce all types of electric motors. Plant at East Pittsburgh, Pa., has been turning out 200,000 horsepower of motors every month, and the addition of the new plant is expected to add another 100,000 horsepower of production. Electric motor production will run 80% higher than in 1937-1939, and about 50% above the peak year of 1940.

New Jefferson Catalog

JEFFERSON ELECTRIC Co., Bellwood, Ill., has issued a new 12-page catalog showing its major products. Transformers for sixteen fields of application are presented with descriptive data. The booklet is Catalog 451-GB.

WATCH FOR Gillen's announcement of their new improved line of Automatic Water Heaters and Furnaces

GILLEN

Automatic

FURNACES and WATER HEATERS

J. L. GILLEN & Co.

DOWAGIAC MICHIGAN

Exceptional Opportunity for Salesmen and Sales Engineers experienced in Oil Heating Field . . .

One of the leading and successful companies manufacturing domestic oil heating equipment is expanding its sales force in several adjacent territories. Experience in the installation and servicing of oil burning equipment would be helpful. These are important positions and the starting compensation is commensurate with previous experience and earning ability. Write fully, giving age, experience and salary range.

Address Box 542, c/o Fueloil and Oil Heat.

WHO WILL WIN THE RACE?

One of these days when production increases, oilheating dealers will find themselves in a buyers' market. Then will begin the race for new customer business. Who will win it? We'll tell you: ROTOFLAME DEALERS.

We've made the ROTOFLAME Burner for nearly 20 years. It is just what good dealers want. We have new equipment ready, too. We don't claim to be the biggest maker, nor do we strive for the *most* burners. But we do make the *best*.

OIL EQUIPMENT LABORATORIES, Inc. Elizabeth, N. J.

Editorial Leaks

(*Continued from page 8*)

il brand acceptance to protect, the big ones did.

To study the problem, a committee of 13 Eastern oil men was appointed by OPA and its recommendations were substantially followed. No one of these men was in any way responsible for the trouble. They were called in as doctors for a sick horse and they realistically made the recommendations that would get quickest action. The members were Dave Butler, Home Fuel Oil Co., Passaic, N. J., H. B. Van Cleve, Maritime Petroleum Corp., New York, E. M. Callis, Petrol Corp., Philadelphia, John Birmingham, White Fuel Corp., Boston, A. J. McIntosh, Socony-Vacuum, New York, E. T. Night, Atlantic Refining Co., Philadelphia, Stewart P. Coleman, Standard Oil Co. (N.J.), New York, William H. Garbade, Shell Oil Co., New York, R. A. Hunter, Gulf Oil Corp., Pittsburgh, J. S. Warden, Texas Co., New York, Harry H. Fuller, Sinclair Refining Co., New York, Neil Buckley, Taylor Refining Co., Taylor, Texas, and Joe Hill, Southport Petroleum Co., Washington, D. C.

OPA men realized that the situation was not one that should be turned over to them, but since they were the only remaining Government agency with any appreciable oil industry jurisdiction they agreed to handle it. They also recognized a public responsibility to keep people from going cold. There is considerable doubt as to whether the price increases in distillate and kerosene will get the hoped-for results. The raise was not enough to make gasoline much less attractive to small refiners, so about all it can be expected to accomplish is to partly compensate the large companies for stepping up their fueloil runs to their own disadvantage, but to satisfy oilheating users in a sense of public responsibility.

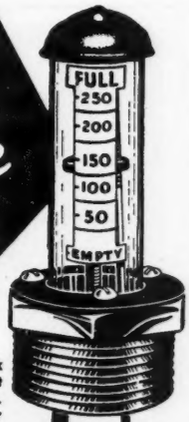
The price increase, within the strict framework of price control, was definitely wrong, but as a realistic step to coax refiners to shift yields it was probably right. But more important, it sets a very serious precedent, one that may live to plague us for a long time. Every mother's son is praying to get business out of Government and vice-versa. Yet the minute we get into trouble through the industry's own shortsightedness or skulduggery we run to Washington with pleas for help to make us behave. There was no question in this instance of industry distress . . . refiners, almost without exception, are decidedly prosperous. What we asked was that Government coax us with a dole from the public to do what the industry already knew it should do and could well afford to do without charity.

OPA has been damned up and down for meddling with economics and not sticking to its job of preventing inflation. Oil industry men have been among the loudest of the critics. Now we have asked them to adjust our internal economics and they have done it, with considerable misgiving. If industry ever expects to get free of Government it has a long way to go in the direction of self-government.

◈

Attention of those who like to dream is called to a recently announced filter development that was made to separate U-235 from the more abundant U-238.

Adjustable FUEL-OIL GAUGES by Mel-Gauge COMPANY
EAST HAVEN, CONNECTICUT



Easy, accurate tank content readings at no increase in cost. Write for folder or distributor agreements.

Patented

OIL SOOT E-Z DESTROYER

WAR ON WASTE!

Increase efficiency of oil by keeping heating unit free from excess soot. All oil soot in fire chamber and flues vanishes instantly when sprayed with E-Z Fuel Oil Soot Destroyer.

"EASY TO USE— ECONOMICAL TOO!"

DISTRIBUTORS: *Write for fine proposition.*

HEALY-RUFF COMPANY, 797 Hampden Ave., St. Paul, Minn.
Enclosed find check ( ) money order ( ) Send the following prepaid:

No. 1 pkg.....$1.00
No. 5 pkg..... 4.50

Name .....
Address .....
City..... State.....

MAKE A VAPOR SYSTEM OUT OF ANY STEAM JOB

GORTON *Equalizing Valves for Radiators and Gorton Air Eliminators For Mains*

Gorton Valves will Vaporize and Equalize any steam job. All radiators will heat evenly and quickly on 8 ozs. vapor pressure. No pipe changes required.

SEND FOR LITERATURE AND PRICES

GORTON HEATING CORP., Cranford, New Jersey

Since 1887 Manufacturers of Heating Equipment

Since these two Uranium substances are chemically the same element, they could not be separated by chemical methods. Physical filteration was one method used to get the desired U-235.

Filters were made with openings less than a millionth of an inch, and the U-235 gas was made to pass through the filter, while the U-238, being heavier by less than 1.28% and composed of a coarser atom, was not able to go through. Physical separation of the elements in a gas presents some interesting possibilities in many fields, and could have far-reaching effects on heating practice and equipment.

Consider the effect on manufactured gas quality and distributing problems if it were possible to filter inert gases out of the product before it was put into the city mains. Gas with several times the present heat content per cubic foot would cut the volume demanded, and make it possible to serve many more customers and a greater heat demand with presently inadequate mains.

Filters and methods of separating gases with less than 1.3% difference in weight are expensive. The special equipment operates under high vacuum and is costly to build and operate. But oxygen is 14.22% heavier than nitrogen, and with a relatively "crude" filter it might be possible to push most of the nitrogen through the barrier and use only an oxygen-enriched air for combustion. CO_2 percentages might run between 50% and 100%, flue gas volume would be cut to a minimum, boiler and furnace passes might be mere slits, and physical size of the whole heating plant would need to be no larger than a shoe-box. Of course, there is the matter of metallurgy to be solved. A flame the equivalent of an oxy-acetylene blow-torch would not be kind to conventional cast iron and steel heating plants, but as Anthracite Industries said when they presented the trade with a coal burning idea, "Adaptation is the problem of the industry."

◈

Then there are new problems coming up for those who supply equipment to aircraft manufacturers. Instead of heating cabins, the problem soon is to become one of cooling. The passage of air over the skin surfaces of an airplane creates friction, and friction causes heat. Somewhere above 500 miles per hour the heat generated by even 0° air sliding across the plane surfaces will make the cabin too warm.

With all that cold air just outside the window, it doesn't seem possible that the solution to this problem can be too difficult, but we toss out the idea for those who like to worry.

◈

While we were worrying about all the problems 1945 presented, the 100th anniversary of the first steam heating installation slipped by without appropriate recognition from this department. According to the best available records it was in 1845 that the Eastern Hotel in Boston became the first building in the United States to be heated by steam.

◈

THE MILWAUKEE SCHOOL of engineering has recently issued a very attractive brochure describing its heating and airconditioning courses.

A TIMELY SPECIAL!!

We offer a combination package of items which should be in every serviceman's car.

CONVENIENTLY PACKAGED—SPECIALLY PRICED

	REG. PRICE	TOTAL
2—Qt. Cans—Asphalt Paint	$.35 ea.	$.70
2—Qt. Cans—Chem-"B" Boiler Cleaner	1.50 ea.	3.00
2—No. 1 Cans—Boiler Solder (Chem-Metallic Weld)	2.25 ea.	4.50
2—1 lb. Cans—Chem-"O" Fuel Oil Tank Cleaner	.75 ea.	1.50
2—4 lb. Cans—Furnace Cement	.36 ea.	.72
2—5 lb. Cans—Oil Line Cement	1.15 ea.	2.30
2—2 lb. Cans—Chem-"S" Soot Destroyer	1.50 ea.	3.00
1—Soot Gun	.50 ea.	.50
TOTAL		$16.22

SPECIAL PRICE—$10.00 F. O. B. Marlboro, N. J.

Send your order direct to factory!

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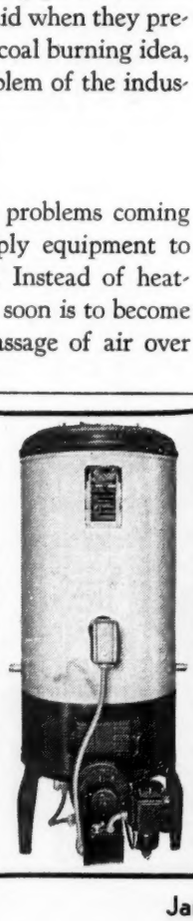
MARLBORO, NEW JERSEY



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WITH BOTH VAPORIZING AND PRESSURE TYPE BURNERS
Available in Six Sizes

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MADISON WISCONSIN

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The Heater of simplicity—compactness—and easiest to maintain. Can be cleaned without removing piping. ALL STEEL—NO GASKETS IN THE FUEL OIL COMPARTMENT—BUILT BY—

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55 West 42nd Street **New York 18, N. Y.**

Patentees and manufacturers of fuel-saving water wall furnace extensions and forced circulation boilers.

DEGREE DAY TABLES

ONE MONTH ONLY					SEASON TO DATE			
	November		Percent		(Sept. 1 to Nov. 30)			Percent
Normal	1944	1945	Change*		Normal	1944	1945	Change*
756	786	759	+ 0.4	Albany	1282	1425	1372	+ 7.0
393	422	361	— 8.9	Atlanta	535	556	489	— 8.6
531	515	464	—14.4	Baltimore	795	788	689	—13.3
651	657	584	—11.5	Boston	1087	1110	1023	— 5.9
747	695	727	— 2.8	Buffalo	1282	1281	1322	+ 3.1
709	670	760	+ 7.2	Chicago	1127	1120	1310	+11.6
613	611	578	— 6.1	Cincinnati	939	943	893	— 4.9
688	656	655	— 5.0	Cleveland	1134	1128	1138	+ 0.4
298	259	206	—30.9	Dallas	373	289	299	—19.8
721	688	721	. . .	Denver	1260	1081	1298	+ 2.9
768	698	770	+ 0.3	Des Moines	1224	1052	1304	+ 6.4
753	676	699	— 7.2	Detroit	1249	1155	1241	— 0.6
768	693	741	— 3.5	Grand Rapids	1327	1211	1353	+ 2.0
691	741	678	— 1.9	Hartford	1165	1258	1187	+ 1.9
940	1027	999	+ 6.3	Helena	1829	1800	1864	+ 1.9
162	147	75	—38.9	Houston	189	155	108	—42.9
663	625	684	+ 3.2	Indianapolis	1027	951	1144	+11.4
599	556	566	— 5.5	Kansas City	891	724	881	— 1.1
110	182	138	+25.5	Los Angeles	158	221	167	+ 5.7
550	537	513	— 6.7	Louisville	802	782	763	— 4.9
788	709	832	+ 5.6	Milwaukee	1317	1255	1506	+14.4
943	819	997	+ 5.7	Minneapolis	1590	1378	1730	+ 8.8
147	125	102	—30.6	New Orleans	170	138	110	—35.3
600	571	530	—11.7	New York	925	889	839	— 9.3
741	738	755	+ 1.9	Omaha	1147	1058	1186	+ 3.4
548	530	581	+ 6.0	Philadelphia	820	815	984	+20.0
656	668	647	— 1.4	Pittsburgh	1049	1137	1096	+ 4.5
792	806	819	+ 3.4	Portland, Me.	1430	1540	1590	+11.2
540	537	332	—38.5	Portland, Ore.	947	760	802	—15.3
675	643	579	—14.2	Providence	1142	1035	1064	— 6.8
558	572	603	+ 8.1	St. Louis	812	762	916	+12.8
712	795	774	+ 8.7	Salt Lake City	1184	1076	1292	+ 9.1
242	362	336	+38.8	San Francisco	504	638	591	+17.3
965	913	976	+ 1.1	Sault Ste. Marie	1860	1852	1999	+ 7.5
558	515	585	+ 4.8	Seattle	1104	839	1166	+ 5.6
721	719	708	— 1.8	Toledo	1188	1242	1252	+ 5.4
558	526	485	—13.1	Washington	855	830	741	—13.3

*Compared with last year, not with normal.

Proven by PERFORMANCE—

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Filters • Strainers • Pumps for FUEL OIL

Intelligent engineering is only the starting point. Consistent on-the-job performance over many years provides practical endorsement of KRAISSL design and manufacture.

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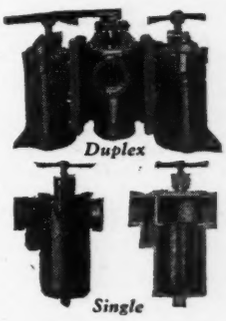

Single and Duplex types for suction or discharge service—any practical degree of filtration in units designed for low pressures as well as up to 500 lbs. hydrostatic test—easily removable filter basket insures quick cleaning.

Class 60 Heavy Oil Pumps

Standard equipment wherever independent pump and motor sets or booster pumps for pump-type burners are required.

Kraissl-Trumbull No. 522 Fuel Pump Unit

Rugged, dependable wall pump for gravity type oil burners having burning capacity of not more than 3 gals. per hour—Approved by Underwriters' Labs., Inc.

Submit your fuel-line problems to KRAISSL engineers—literature and prices on request.

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FUEL OIL PRICE CHART complete with celluloid holder. Made for use by drivers or office personnel. Stop figuring over and over again. When ordering advise us retail fuel oil price in your town. Chart shows from 1 to 999 gallons and the amount in dollars and cents you should charge your customer. Price $1.00. Degree Day Systems, 5104—39th Ave., Woodside, N. Y.

WANTED: An Executive Type Sales Manager to take care of New England distribution of nationally known Oil Burner Agency and Domestic and Commercial Fuel Oil Sales. Chicago or New York experience preferred. Permanent, good paying position for the right man. Write qualifications and references to P. O. Box 86, Charlestown 29, Mass.

BOSTON DISTRIBUTOR for nationally known oil burner has unusual opportunity for an outstanding man capable of assuming complete charge of installation and service department for commercial and industrial application of heavy oil. Will defray expenses to Boston for interview where satisfactory salary arrangements will be made. Address Box 534, c/o FUELOIL & OIL HEAT, 232 Madison Avenue, New York 16, N. Y.

FOR SALE: Small quantities or in job lots ½ in. double poppet foot valves with screen, ½ in. by 2 in. double tapped brass bushings and ½ in. by 8 in. bolts and nuts. Mechanical Devices Co., Inc., 141 Oakland Street, Trenton, New Jersey. Trenton 8208.

WANTED: High class installation and service manager for complete heating systems, oil burners and air conditioning. If you have the ability communicate with us at once. Mechanical Devices Co., Inc., 141 Oakland Street, Trenton, New Jersey. Trenton 8208.

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A SERVICE AND INSTALLATION MANAGER on domestic oil burners. We are representing Chrysler Airtemp in Essex and Union Counties in the State of New Jersey with Headquarters in Newark. We are a new company, soundly financed. We are desirous of securing the services of two qualified men, one as Manager of our Service Department, and the other as Manager of our Installation Department. This is a real opportunity for the right man. Call us or write us at your convenience. All replies will be treated in strict confidence. Climate Control Products Co., 390 Halsey Street, Newark 2, N. J. Market 3-5711.

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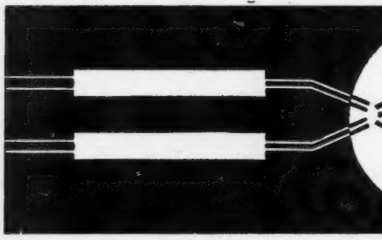

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